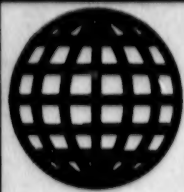


JPRS-UEA-90-026
6 AUGUST 1990



**FOREIGN
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JPRS Report

Soviet Union

Economic Affairs

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CONTENTS

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NATIONAL ECONOMY

ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

Further Information on Government Reform Program Reported	1
Macroeconomic Indicators of Variants Compared	1
[EKONOMIKA I ZHIZN No 28, Jul 90]	2
Proportion of Fixed, Regulated, Free Prices [EKONOMIKA I ZHIZN No 28, Jul 90]	2
Shmelev Discusses Reform Priorities, Aganbegyan Commission	2
[N.P. Shmelev; PRAVITELSTVENNYY VESTNIK No 28, Jul 90]	7
Justice Minister Interviewed on Legal Needs of Regulated Market	7
[V. Yakovlev; PRAVITELSTVENNYY VESTNIK No 26, Jun 90]	9
CIA Data Quoted to Bolster Opposition to Market	9
[V. Yakushev; SOVETSKAYA ESTONIYA, 7 Jun 90]	10
Support For Market Reforms Broken Out By Region, Social Groups	10
[V. Ivanov; NTR TRIBUNA No 9-10, 1990]	12
Greater Role Foreseen for People's Control Under Market Conditions	12
[G.V. Kolbin; PRAVDA, 1 Jul 90]	

PLANNING, PLAN IMPLEMENTATION

Methods, Institutions Outlined for Regulating Economy	16
[V. Smirnov, et al; PLANOVOYE KHOZYAYSTVO No 5, May 90]	

INVESTMENT, PRICES, BUDGET, FINANCE

Goskomsen Uncovers Record Number of 'Illegal' Price Hikes	22
[V. Golovachev; EKONOMIKA I ZHIZN No 19, May 90]	
Central Investment Cuts Linked to Rise in Unfinished Construction	24
[Sh. B. Sverdlik; EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) No 5, May 90]	

REGIONAL DEVELOPMENT

Estonian Minister on Enterprise Subordination, Energy Needs	29
[Yaak Tamm; SOVETSKAYA ESTONIYA, 22 May 90]	
Industrial, Living Conditions in Donbass Detailed	31
[V. Kotelnikov; VESTNIK STATISTIKI No 2, Feb 90]	

AGRICULTURE

AGRO-ECONOMICS, POLICY, ORGANIZATION

Military Vehicle Support to Harvest Efforts [V.F. Popov; SELSKAYA ZHIZN, 19 Jul 90]	37
---	----

AGROTECHNOLOGY

Improved Per Capita Grain Production Requires Imports, More Corn	38
[V. Loskutov; URALSKIYE NIVY No 4, Apr 90]	42
Achieving More Effective Grain Production	42
Change in Crop Structure Needed [B. S. Markin; STEPNIYE PROSTORY No 1, Jan 90] ..	46
Wheat Crop Structure Discussed [N. V. Pavlov; STEPNIYE PROSTORY No 1, Jan 90]	47
Four Steps Toward a Solution [V. I. Loskutov; STEPNIYE PROSTORY No 4, Apr 90]	

CONSUMER GOODS, DOMESTIC TRADE

POLICY, ORGANIZATION

BSSR Economic Accountability Benefits Consumers [N. A. Makayed; SOVETSKAYA TORGOVLYA, 17 Apr 90]	55
---	----

FOOD PROCESSING, DISTRIBUTION

People's Deputies Advocate Privatization To Solve Food Problem [V. Shchurov; TRUD, 18 Apr 90]	57
--	----

TRANSPORTATION

CIVIL AVIATION

Aviation Industry Delegation Visits U. S. [A. Geraschenko, A. Batkov; IZVESTIYA, 11 Jul 90]	59
New Tu-334 Aircraft Highlighted [V. Dubovoy; VOZDUSHNYY TRANSPORT, 19 Jun 90]	60

RAIL SYSTEMS

Rail Transport Management Structure Questioned [Ye. Ayzenberg; GUDOK, 6 Jun 90]	62
Military Construction Units Withdraw from BAM Railway Zone [N. Belyy; RABOCHAYA TRIBUNA, 23 May 90]	63
Rail Performance Statistics Reviewed [GUDOK, 5 Jun 90]	66
Rail Leaders Score High Number of Accidents [GUDOK, 5 Jun 90]	66
Rail Minister Visits Khabarovsk [S. Ponomarev; GUDOK, 5 Jun 90]	66
Tank Mine Found Near Rails [V. Nikolayev; GUDOK, 5 Jun 90]	67
Hazardous Materials Incidents Revealed	68
Tomsk Area [N. Domozhirov; GUDOK, 27 Jun 90]	68
At Inguets Station [N. Pelykh; GUDOK, 27 Jun 90]	69
Railroad Violates Regulations, Ships Radiation-Contaminated Meat [E. Freyman, et al; GUDOK, 24 Jun 90]	69

MARITIME AND RIVER FLEETS

Maritime Fleet Official Interviewed on Soviet-U.S. Agreement. [V. Kornilov; VODNYY TRANSPORT, 5 Jun 90]	74
'Sovkomflot's' Role, Profits Reported [I.S. Osminin; VODNYY TRANSPORT, 7 Jun 90]	75
Ship Design Concepts Discussed [B.N. Zakharov; SUDOSTROYENIYE No 5, May 90]	77
Shipyards Activity Reported [A.N. Khaustov; SUDOSTROYENIYE No 5, May 90]	82

ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

Further Information on Government Reform Program Reported

Macroeconomic Indicators of Variants Compared

904A0486A Moscow *EKONOMIKA I ZHIZN*
in Russian. No 28, Jul 90 p 12

[Letter to the Editor, Untitled]

[Text] *I would like to obtain more detailed information about economic development forecasting assessment variations during formation of the regulated market that the government program has been talking about. They say that precisely these calculations allowed them to come to the conclusion that a "leap into the market" would be disastrous for us. (G. Zhukov, Kolchugino)*

These data are contained in the government report "On the Country's Economic Situation and the Concept for the Transition to a Regulated Market Economy" submitted to the third session of the USSR Supreme Soviet. It points out that we need to link forecasting assessments not only with the transition to market economic conditions but to consider all factors of economic life and political processes.

The starting point for formation of market relations is attainment of the economy's material financial balance in the shortest possible period. The shortest path to this is free prices that reflect the correlation between supply and demand but it leads to uncontrolled inflation. We can restrain inflation using administrative and finance-credit mechanisms.

With preferential utilization of finance-credit methods already during the first stage, we need to ensure that there is no linkage of commodity resources with covered monetary assets of the population (180-200 billion rubles) or enterprises (40-50 billion rubles). The duration of the transition period to a market economy depends on our degree of success in resolving this task. Calculations for the first variant of national economic development during the transition period have been conducted based on these conditions.

Since indicators show that the consequences of this variant are negative, the primary indicators of the second variant were determined. Here they had in mind weaker measures to limit the monetary mass with the large scale use of government regulatory methods.

What are the advantages of the first variant? Accelerated access to balanced material-financial proportions, increased effectiveness of resource utilization, and significant growth of social production, especially of the consumer sector. As seen in the table, the gross national product in 1995 will increase by nearly 1.5 times the level of the 1990 gross national product and real per capita income will increase by 25-30 percent under its effective employment. And what are the shortcomings of this variant? During the first stage, production is reduced in heavy industrial sectors and a severe slump in investment activity occurs, especially in the production sphere. A significant release of those employed in physical production and reduction of the level of real per capita income are characteristic for the first period under this variant. The first two years will be particularly difficult.

In the second variant, negative characteristics are significantly smoothed out but then the period to attain the economy's material financial balance is substantially drawn out. By the end of the five year period, the primary indicators of the country's socio-economic development are lower.

Primary Macroeconomic Indicators of National Economic Development In Accordance with Variants I and II at the Beginning and End of the Next Five-Year Period

	Unit of Measure	Variant I		Variant II	
		1991	1995	1991	1995
Gross National Product	billions of rubles	765-810	1,300-1,350	830-860	1,125-1,220
—Growth Rate Compared to 1990	%	85-90	144-150	91-95	125-135
Utilized National Income	billions of rubles	510-545	880-900	555-590	700-715
—Growth Rate Compared to 1990	%	80-85	138-141	87-92	110-115
Total Number Employed	millions of people	130-133	140-143	133-136	140-142
—Growth Rate Compared to 1990	%	93-95	100-102	95-97	100-101
including:					
—In Physical Production	millions of people	82-85	77-80	90-95	80-85
—Growth Rate Compared to 1990	%	82-85	77-80	90-95	80-85
—In the Nonproductive Sphere	millions of people	46-49	62-64	41-43	57-60
—Growth Rate Compared to 1990	%	115-122	155-160	102-107	142-150

Primary Macroeconomic Indicators of National Economic Development In Accordance with Variants I and II at the Beginning and End of the Next Five-Year Period (Continued)

	Unit of Measure	Variant I		Variant II	
		1991	1995	1991	1995
Capital Investment—Total	billions of rubles	95-105	290-310	160-170	205-215
—Growth Rate Compared to 1990	%	48-53	147-157	81-86	105-110
—Including:					
—Production	billions of rubles	50-55	60-70	105-110	80-85
—Growth Rate Compared to 1990	%	36-40	43-50	75-80	58-61
—Nonproductive	billions of rubles	45-50	230-240	55-60	125-130
—Growth Rate Compared to 1990	%	77-85	393-410	94-102	215-220
Materials Consumption Growth Rate Compared to 1990	%	101-102	83-85	103-104	90-93
Productivity of Labor Growth Rate Compared to 1990	%	94-97	175-180	93-95	127-134
Real Per Capita Income	%	93-96	125-130	97-99	105-110

Proportion of Fixed, Regulated, Free Prices

904A0486B Moscow *EKONOMIKA I ZHIZN*
in Russian No 28, Jul 90 p 12

[Letter to the Editor, Untitled]

[Text] *A gradual transition to free price formation in the market is one of the main specific features of the market economy transition concept proposed by the government. How is the price structure change being forecast? For example, what can the ratio of free prices on individual commodities be during the first stages? (Ye. Bogatyrev, Izhevsk)*

It is assumed that three types of prices will be operating at the same time: Fixed, regulated, when as a rule the upper price limit is limited, and also free prices which are formed depending on supply and demand for some product. At the same time, it is important that the fraction of free prices gradually increases. And if we talk about the retail price system, then it is assumed that its structure will look like this in 1991:

	In Percentages of Commodity Turn-over		
	Fixed Prices	Regulated Prices	Free Prices
Food Commodities	60	25	15
Light Industrial Commodities	60	30	5-10
Everyday Life and Economic Commodities	40	35	25
Total of Commodity Turn-over	55	30	10-15

Let us also point out that government concepts initially provide for a one time review of retail prices and only afterward a gradual transition to a regulated or free mode of individual types of prices food and nonfood commodities. The State retains the prerogative to set or regulate retail prices for bread and bakery products,

meat and meat products, vegetable oil, milk and milk products, sugar, and also medicines, patient care items, and a number of other commodities including wine and spirits and tobacco products.

Shmelev Discusses Reform Priorities, Aganbegyan Commission

904A0483A Moscow *PRAVITELSTVENNYY VESTNIK*
in Russian No 28, Jul 90 pp 4-5

[Interview with Nikolay Petrovich Shmelev, USSR people's deputy and doctor of economic sciences, by Yu. Popov and L. Chernenko: "An Alternative"]

[Text] *The USSR Council of Ministers adopted a resolution on forming the Commission for Assessing Alternative Variants of the Transition to a Market Economy.*

The commission included O.T. Bogomolov, A.G. Granberg, V.G. Gribov, A.M. Yemelyanov, T.I. Zaslavskaya, I.D. Ivanov, V.G. Kostakov, V.N. Kudryavtsev, K.V. Kunitskiy, S.I. Lushin, A.L. Makovskiy, V.A. Martynov, B.Z. Milner, A.A. Nikitin, V.D. Protasov, A.I. Tizyakov, V.A. Tikhonov, G.S. Khizha, V.P. Chichkanov, N.N. Engver, R.M. Entov, and Yu.V. Yarmenko. This creative collective was headed by A.G. Aganbegyan. N.P. Shmelev was his deputy.

The commission will have to examine and assess alternative variants of the transition to a market economy, analyze proposals on this point, and work up recommendations for their inclusion in the program of interrelated measures for forming the structure and mechanism of a regulated market economy. *PRAVITELSTVENNYY VESTNIK* will cover this work and the alternative variants, giving the authors and their opponents a chance to speak.

Today, N.P. Shmelev, deputy chairman of the Commission for Assessing Alternative Variants of the Transition

to a Market Economy, USSR people's deputy, and doctor of economic sciences, answers the editorial staff's questions.

[Popov/Chernenko] Nikolay Petrovich, creation of such a commission is a new phenomenon in the work of the government attesting to the growing democratization of the process of making the most important state decisions. This is truly a courageous step—to enlist the cooperation of opponents of the governmental program, many of whom are also on the commission. The USSR Council of Ministers appealed to the country's scientific public, specialists on the economy, and public organizations to take an active part in drawing up a specific program for the transition to a market economy and to make their proposals on this question. This could not even have been imagined earlier. But at all times the country's leading economists were writing a great number of notes, inquiries, and proposals for bodies of state administration which not only were not implemented, but were not even considered. Behind this is the important problem of the interaction of science and state administration, mutual relations between scientists and politicians. It turned out that a sensible approach, sober analysis, and bold idea broke through from the sphere of science into the sphere of politics only through publicity. In fact, many of your ideas also took such a path, Nikolay Petrovich. Do you believe that the time has finally come for direct dialogue between science and government and that they will listen to the scientists at the highest spheres of influence of state administration? What conditions are necessary for this?

[Shmelev] Of course, one cannot make it look as though our scientists and economists only now have begun to see clearly, for decades did not see the true state of our economy, and did not ponder the paths of its development. I have been studying economic problems for 30 years. And I remember only one brief period of sufficiently loud actions by economists—this was in the late 1950s and early 1960s. But the attempt to speak the truth about our economy and the paths of its development was very quickly suppressed. The last outburst of common sense in the press was the book by G. Lisichkin, "The Plan and the Market," which caused a big scandal at that time. However, I know a great number of people who have covered tons of paper with writing stamped "For Official Use Only" or "Secret." All this went "upstairs," to the "levels of authority," like into a black hole, and disappeared there forever. You see, people wrote in their notes how to pull our economy out of the mire where it is gradually sinking. And there were quite a few sensible ideas which can be used today, too. But all these notes, unfortunately, had no effect on our life. At best, the assistants of big chiefs read them, or the leadership skimmed over them obliquely. But the effect was zero. In other words, they did not listen to the professional economists.

We sense a hope with perestroika. At least they have begun reading our notes "upstairs." But this still does not mean that the economic policy is now beginning to

be worked out taking into account professional opinion. During the years of perestroika there also were so many volitional improvisations, which were impossible to justify by any economic arguments.

I will list as examples only the most obvious mistakes which I do not see as the fault of any professional economists. The anti-alcohol campaign. The decree on fighting unearned income. The reduction of consumer goods imports after the drop in oil prices. Turning the "money" printing press on at full capacity in 1987-1988 under pressure from both the ministries and social demands; the result was a monstrous budget deficit. I do not know a single economist who could have advised doing such a thing. On the contrary, they all objected. But their arguments were simply ignored.

In such conditions, there remained only one way to be heard and to attract the public's attention to the problem—publicity. I turned to it somehow spontaneously: I was asked to write just what I was thinking, and they promised to publish it. I rejoiced in this opportunity to express openly everything that built up in my soul. So, this was not a calculated move, as in chess: they say, if it does not come by official channels, I will turn to the "street." Strange as it may be, several of my articles like this made them heed the advice of professionals. Here, apparently, publicity played a positive role.

Unfortunately, we are late in everything. However, I see that the influence of professional economists on governmental decisions is becoming greater and greater. It is apparent that our government is also learning fairly quickly. And it must be said that it has already learned much. But the question is whether or not we have time for learning. I am afraid that there is very little time left for this. We can pull the economy out of the crisis only by the common efforts of the government, professional economists, and all the people. And here, of course, we must listen to one another, carefully weigh everything, and examine existing alternative variants.

[Popov/Chernenko] What is your own alternative variant? Is it subject to discussion in the commission?

[Shmelev] I am always afraid of being accused of ambitiousness and therefore would say this: Does a Shmelev variant exist at all? Most likely not. Of course, like the majority of scientists, I have an approach to solving economic problems, and it still differs from the government's approach. In simplified form, the latter comes down to one thing: We will produce more, and all the problems will solve themselves. This, I would say, is the approach of a producer, not of an economist, a "quantitative" approach: they say, there is not enough of this and that, we must produce all this, and then everything will stand in its place.

But you see, paradoxical as it may seem, this is a secondary aspect from the standpoint of improving the economy. It may appear heretical for us, but long ago it was not heresy for world economic science. We are not the first ones to end up in such a difficult economic

situation as we have today. Dozens of countries have gone through this dozens of times. And we must clearly remember that improvement of the economy is, above all, improvement of the monetary and financial system and the market.

Call this approach whatever you want, even a monetary approach. But we must begin with the ruble; we must make it work and normalize the circulation of money. You see, a normally operating ruble must lie at the basis of all our plans and laws, all our strategy. Everyone needs a ruble that is also in short supply. But now no one needs it—not enterprises, not even many people. And until it "begins working," all our programs and variants will be built on sand.

Therefore, the difference between the administrators and professional economists is that professional economists place the task of improving the monetary system in first place and propose first to decide what to do with the monstrous mountain of money for which there are no goods. This is not even a mountain, but a genuine volcano, which has blown up the consumer market. Indeed, if enterprises have 150 billion rubles and do not know what to spend them on, what kind of monetary incentives can they have? What kind of profits and taxes can we talk about? Everything again rests on exchange in kind. And until the government understands that the main problem is not at the end from which it begins and that we must begin not with an increase in production, it is not likely that we will get out of this difficult situation quickly.

I emphasize: increasing production is not the starting point for improving the economy. Most likely we are even doomed to its decline for several years. This, apparently, is an inevitable short-term fee for the transitional period and readjustment of the economic mechanism, which is also confirmed by the experience of many countries. The main task is to create in the market an excess of supply over demand. How? Just with the aid of an increase in production? No, we will never achieve this in this way. Above all, we must change the correlation between commodity mass and money and must operate by monetary methods. And many share this opinion.

[Popov/Chernenko] What do you personally think of the government's concept? What aspects of it, in your view, should be decided differently, in an alternative variant?

[Shmelev] I understand that the government—perhaps owing to responsibility or conservatism or the past experience of the people who form it—not only has rejected many things, but also overly cautiously approached the working out of the program and did not demonstrate enough imagination in this draft. As far as my personal opinion is concerned, which I never have hidden, I see the following as the most major flaws in the government's program.

First. It still retains the vestiges of an ideological approach; division of labor into "clean" and "dirty,"

socialist and non-socialist; division of sources of progress into ideologically permitted and not permitted. You see, it is high time that we remove the question of what types of enterprise we can permit ourselves and what types we cannot. Of course, I do not mean the criminal side of this.

Our ideological approach is this: everything except private ownership. Why are we afraid of this? After all, there is even a socialist sector in America! Indeed, in addition to joint stock ownership, which for a long time already has been some kind of a compromise between public and private ownership, and a compromise that is working well, there is such a sector. Eleven million people (consider this figure!) work at enterprises which are managed by the collectives themselves. This, after all, is pure socialism!

But there is, of course, a sector which in 1,000 years will still be serviced by private labor. Repair shops, let's say. It is impossible for the state to maintain them, and they never would be efficient. The service sector, to a considerable extent, has been and will always be a private interest. A Korean grocer is willing to work 24 hours a day. And that is why he has taken over all of the American grocery trade. This is an organic characteristic of private ownership.

Moreover, in the United States, the classical private sector where the owner and the hired worker operate is not great—it provides scarcely more than 20 percent of the gross product. The rest is a compromise between private and public ownership. For the time being, we are stifling the initiative of enterprising people.

If we are to take the path of a market economy, we are also certain to encounter the problem of employment. We already have 5-6 million unemployed in the country now. In addition, there is a layer of bureaucrats which should become considerably thinner in a market economy. Some part of it will also be looking for other employment. But the most important thing is that at any of our enterprises, one out of every four workers is "excess." Everyone knows this. And if we are to take the path of a market economy, this one-fourth of the work force will be released, although not right away. In these conditions, any form of employment is beneficial. We are in favor of a person being employed in something and have something with which to make a living. In this case, it is unreasonable, even from the standpoint of charity, to ignore such a reserve as the possibility of private initiative. Create conditions for these people so they can open barbershops, tailor shops, repair shops. In this way the problem of employment will be partially resolved, and for the benefit of society. But to do this, we must abandon ideological approaches.

Second. This evoked the greatest passions in society, and probably will in our commission, too. I am talking about price reform. It seems to me that the government still has approached this problem from purely fiscal positions, thinking about how to take away from people the 60-70

billion rubles, which it is unable to provide goods for. Regardless of what we say about compensations and other measures, the goal of such an action, in my opinion, is to take away these billions.

There are now two points of view. One, which I represent, is that the goal of price reform must be different. Imagine a yoke, one side of which is artificially lowered, and the other side lifted up. Such is the correlation of our prices, maintained since 1929. Prices for food and energy, transportation, and housing have been sharply and irrationally set too low—by a factor of 2-3 compared to normal prices. On the other hand, prices, say, for vodka, automobiles, and even irons have also been sharply set too high.

The financial expression of this is such: On the one hand, the state spends more than 100 billion rubles on subsidies; on the other hand, our country is the only one in the world in which a so-called turnover tax exists on such a great scale. These two burdens are almost equal. That means we should abolish subsidies and simultaneously the turnover tax. Then the price correlations would even out.

It seems to me that the state's first action in the area of prices should be this. First, an administrative step, changing the basic proportions. Then leave everything to the market; let the market regulate them itself.

That is my approach. There is also another variant: "shock therapy"—immediately turn over control of all prices to the market. I think I would have to argue a lot about this. But neither approach is fiscal. To apply them means to smash the distorting mirrors and put up a normal mirror in which we could see how we actually live and what costs what.

Third. I cannot agree with the adopted variant of the tax policy. In my opinion, the Law on Taxation of Personal Income is especially bad, and the Law on Enterprise Taxes does not look any better.

It seems to me that the adopted system of taxes on personal income directs people toward stealing. After all, it simply turns out to be inconceivable to increase income by legal means beyond the 1,500 rubles per month. Everything innovative and enterprising is thus driven into the shadow economy. Perhaps people there will always be people who steal—this is understandable. But a new circumstance is being added here: it makes no sense to earn a lot legally. This is the case now. But when a general increase in prices and wages begins (and this race between wages and prices is inevitable for several years), we may reach a point in about 2 years where 1,500 rubles will become a normal wage for us. And they will take away 50 percent of our wages. Then we will become the cruelest state in the world in the sense of taxes, and genuine self-robbery will come. And people will stop working and begin stealing. Therefore, the assertion that the low income sections of the population will receive compensation and we will let the others earn

a living does not sound very convincing. This is a deception—the new tax system will not provide such an opportunity.

The tax on enterprises? That is another matter. But I see many shortcomings here, too. Forty-five percent is still somehow acceptable. But the fact that capital investments are not exempt from taxes is a serious matter. In the United States, if you want to expand business, you exempt it from taxes.

There are also no incentives for foreign investments. The foreign partner is taxed at roughly 45 percent. We are still captive to the illusion that someone needs us and everyone will rush to us. For the time being, we still have to ask them to come here. What sense does it make for any businessman in the West to come here if it can invest its money in Singapore, South Korea, or another country at a 20 percent tax rate? This is more attractive, guaranteed, and also more stable than in our country. He does not know what to expect from us, and he is still forced to pay such a high tax... Maybe experimenters will come here. But the normal businessman will not, and not in large numbers.

Fourth. Back three years ago, I began saying that we were underestimating the foreign factor in improving our economy and the consumer market. In this regard, I was criticized for not being patriotic enough. But time passed, and I became convinced once and for all that we had missed the opportunity when we could have corrected matters just through internal resources without resorting to urgent outside assistance. I am confident that we will not resolve short-term problems without outside assistance, without foreign loans, and long-term problems in general are resolved throughout the world through universal efforts. Therefore, the more capital we attract, the better it will be for us.

But today's problems cause me the greatest concern. What do I have in mind? The number one problem is the mountain of "hot" money that is not covered by goods. According to the official estimate, a minimum of 165 billion rubles are waiting their turn. And that is why people charge the counters as soon as some kind of coffee grinder, iron, or even panty hose appear there. This is the "hottest" money. This is the hullabaloo, passions, nerves of the crowd, when they buy up everything—salt, flower, cereal, sugar.

Here I absolutely support the government's position that any currency reform involving confiscation is now inconceivable. It is not morally justified. This would be a harsh step, for which the people would never forgive anyone. In 1947, Stalin could not permit himself to take away money, even with all cruelty. And now you will not collect much in a hunt for millionaires. Even the several billion rubles gained by this method will not fundamentally solve anything. And if a currency reform is carried out, it would be necessary to affect any average citizen

and take away all "excess" money beyond some established limit, and a very low limit. We cannot permit ourselves to do this.

Then only one thing is left: redeem and paralyze this money which everyone is spoiling. Throw out something that people would gladly buy, give up their money, and be satisfied. The mountain would melt away. I continue to insist that it is possible to accept foreign loans and increase imports of consumer goods. And this would not cost so much—\$20 billion at the most. This is not much by world standards. A temporary short-term injection of imported goods into the market could paralyze the money mass. And if we sold computers and VCRs, we would receive 35 of our rubles for \$1 of currency expenditures.

Here we must also take into account the psychological aspect. People are tired of waiting. They do not believe in any assurances, promises, and programs. Until there is some tangible proof that at least something in life is going up instead of down, we will not receive national support for economic reform. Just by changing the situation in the consumer market, we can force people to make some sacrifices. But sacrifices may not be necessary. If we could provide goods for the money at today's nominal level of wages and prices, this would signify a real increase in the standard of living by a factor of 1.5-2. This is the case in which the treasury would receive its due, and the people would also be satisfied, and supply would exceed demand in the market.

[Popov/Chernenko] But will we be able to appease the market for long by this method? Won't this be a temporary improvement, while the disease drives in deeper?

[Shmelev] Of course, it is easiest of all to "spend everything on food" in two years and again have nothing for our pains, and start all over again. But this entire action with imports, of course, makes sense only if it is organically built into general move toward a market economy. Only then! Otherwise we cannot do it. We have already "spent too much on food." They say that in the 1970s-1980s we spend \$300 billion. For this money we could have covered the entire country with superhighways or resolved the housing problem. But we spent it senselessly. Of course, we can also spend all this money I am talking about "on food." Therefore, we must take money in the West only for a carefully thought out program of moving toward a market economy.

Many measures envisioned by the government's program are important in this movement—improving the credit and banking system, creating an exchange. Everyone agrees with this, and here we must switch to deeds. Therefore, I would put my name to a considerable portion of the government's program. The main debatable points are the four I mentioned. It is possible that my colleagues will add something more to them.

[Popov/Chernenko] Your commission is made up of scientists and specialists with different, sometimes diametrically opposed views. How will you work to achieve a mutual understanding?

[Shmelev] Yes, I see a great complexity in organizing the commission's activities not only on the scientific but also the human plane. I am not sure that all its members will work equally actively. This may be explained by their profound pessimism in assessing the possibility of being heard. Certainly, human ambitions also have a place here. So, I am not fully confident that this will be a genuine working group. Some part of it will be quite active; the other part, on the contrary.

Of course, much depends on the task that is given the commission. It is formulated in this way: to assess the existing alternative variants and give recommendations to the government. But we perhaps could have done more—on the basis of existing ideas and proposals, actually develop an alternative to the government's program, and not make corrections to it.

I am proceeding from the fact that the commission is a creative collective in which there are very strong professional economists. The majority of proposals have already been stated, and on the whole we already know all the ideas. Therefore, I personally would like to try to create some single, unified variant from the works already available. I think that in 2-3 weeks we could create a structure which would combine all reasonable and realistic proposals on reform, except for the most extreme, unprofessional, and extremist ones.

[Popov/Chernenko] A group is also being created under the Supreme Soviet and the RSFSR government being formed. It will work on alternative variants. How do you think you will cooperate with them?

[Shmelev] We will attempt to establish contacts on an informal level. You see, we have a common cause, and ambitions should take a back seat. Good or bad, but B.N. Yeltsin has a "500 Days" program. Of course, this is also one of the variants, one of the alternatives which we may examine. Among those who are forming groups around the RSFSR Supreme Soviet are people with fresh thoughts; quite a bit may be gleaned from them. My idea is to "weld together" an alternative from several of the most developed programs and propose it to the government, the USSR Supreme Soviet, and all the people. It would be very good if we could come up with such a variant.

[Popov/Chernenko] All the same, how do you think you will structure the work of the commission? With what will you start? Will you be able to manage in a short period of time?

[Shmelev] Of course, we can drown in a sea of proposals in 1 ½ months. After all, we have not only collective authoritative proposals. There are also many individual proposals, and there are quite a few people ready to save

the world... Therefore, bearing in mind the short deadlines, I would take the path of using the collective developments that have the nature of programs. There already are such variants. We must familiarize the members of the commission with them, then get together, discuss, argue for a day or two, and then try to boil them all down into one draft. And we must try not to simply criticize the government, but to create some synthetic variant. If it works out, that will be good. Of course, I can said in advance that this will be a considerably more radical variant than the government's.

Justice Minister Interviewed on Legal Needs of Regulated Market

904A0482A Moscow *PRAVITELSTVENNYY VESTNIK* in Russian No 26, Jun 90 p 5

[Interview with Veniamin Fedorovich Yakovlev, USSR minister of justice, by Yu. Popov: "It Cannot Be Otherwise"]

[Text] **The transition to a regulated market economy, which is in store for us in the near future, is linked to the need for profound transformations of the most varied aspects of social life, including the legislative aspect. The USSR minister of justice will share for us his thoughts on the forthcoming changes and on ways to approach the new economic relations.**

[Popov] Veniamin Fedorovich, the vast majority of the public supports the need for a market economy in our country. At the same time, there are still quite a few people who doubt the advisability of such a step. What is your position?

[Yakovlev] I am a firm supporter of regulated market relations. But I can understand those who are hesitant and uncertain as to whether we need such a major change in general which is comparable only to the revolutionary changes of October 1917. The concern and hopes, deep doubts and anxiety of many are natural—after all, none of them has lived in conditions of a market economy.

[Popov] But perhaps we can actually avoid such a breakup: After all, we have made it more than 70 years and, as some believe, could preserve the former procedures, except for touching up the old system a little?

[Yakovlev] Of course, we could somehow live under the command-administrative system, too. But it is able to function only with the use of coercion and a punitive policy: the command from the center is carried out explicitly; he who does not submit to the strict discipline is held accountable. But who wants to return to coercion after democratization and glasnost? It is unacceptable.

So today we are faced with a dilemma. We must state this distinctly, openly, clearly, and definitely in order for our choice to become clear to everyone: it is necessary to dismantle the old system and build a new one. And the new one is a market economy, that is, normal economic relations based on collective and personal interests of

man, his initiative, enterprise, and talent. These are the same relations about which V.I. Lenin spoke in the last days of his life. It cannot be otherwise.

[Popov] If that is the case, then for the sake of what and on behalf of what goals are we resolved to put an end to the old?

[Yakovlev] I think that achievements await us on the new path that make the radical changes worthwhile. What are market relations? In short, they are a system of economic incentives of production; that is the basis of its effectiveness. Meanwhile, in eliminating the many shortcomings of capitalist production, we threw the baby out with the bath water—the mechanism of economic incentives.

It is generally known what has made the capitalist economy rise in recent decades. Above all, interest is furthered by the businessman. In order to survive in a climate of competition, free enterprise, and a market, he strives constantly to maintain his production at the leading scientific and technological level and make it inexpensive and economically sound. And this includes both minimum production costs and careful expenditure of financial, material, labor, and other resources. There is no need to mention the market's strict attitude toward product quality.

In our country, these incentives have been destroyed completely. We counted on the fact that the worker, freed from exploitation, would work so much better and more productively. But what happened was that he was alienated from production. He ended up in the same situation as a hired work force, however, the only difference being that he was deprived of an economic incentive to work. Indeed, is it not really a paradox that an enterprise that functions better than others ends up with its pockets inside out and is left, figuratively speaking, with the minimum for subsistence?

The result? It became unprofitable to economize on materials, money, and manpower, improve product quality, and introduce new technology. The conclusion is clear: the need for modern, highly efficient production aimed at satisfying the most diverse needs of the people and improving their life turned into a "cry from the heart" of our society and became a condition of its survival. And we can do this only through commodity-money relations, a market.

[Popov] What do the means and methods of regulating the market involve?

[Yakovlev] The economy functions normally when an optimum correlation between supply and demand is maintained. If it begins to suffer from overproduction, crisis phenomena are noted. Product shortage and the "eternal" shortage, for which we are noted, are also ruinous for the economy. To avoid a noticeable disruption in the normal proportion, capitalism resorts to two

methods of regulating the market and ensuring a balance between supply and demand—economic and legislative methods.

In the first case, it is accomplished, for example, through the tax policy (first lowering and then raising the tax rate on business), the budget system (directing funds for construction of large facilities, creating jobs, payment of benefits, increasing wages, and so forth), the finance and currency, credit, price, and other subsystems.

There are quite a few other economic levers for maintaining rhythmic breathing of the market on the macro-level.

Now about the legislative method, or on the micro-level, where billions of specific transactions, contracts, and other ties are intertwined and which form the fabric of the modern system of economic relations. One must not think that their civilized nature under capitalism is explained only by the culture, honesty, and kindness of businessmen. The entire infinite mass of interrelations, each of which operates independently, must also be subordinate to definite and unified "rules of the game" and legal regulation. Otherwise, the economy also begins to function irregularly.

Throughout the history of market relations, beginning with Ancient Rome, people sought to direct their development into channels desirable for themselves and created for them a framework in the form of laws. In this connection, Roman civil law appeared, which I would call the classic market regulator and which is only arbitrarily named civil law. With the birth of capitalism in France, Napoleon's civil code emerged. Its tenets are still in effect today.

It is quite obvious that both systems of regulation may function in any market economy, including a market economy based on socialist production relations and socialist ownership. Consequently, we will have to master both systems. That is why intensive legislative activity awaits us. You see, in essence, our economic system was regulated by orders, instructions, directions, regulations, and plans. And there was no room left for the law. And did our economic managers pay any attention to it? Did they ever check their actions with the law? Did they go broke because they violated it? Did they receive any advantages if they strictly adhered to its orders? Obviously, the answer to these questions is no, because they never dealt with real legislation.

Now we cannot enter the market without it and cannot let the intertwining of ties between commodity producers, enterprises, citizens, and so forth take its course. Let us take just the problem of forming and registering juridical persons. You see, before recognizing any of them, we must first make sure that they conform to the law and regulate not only their emergence but also their liquidation. That is what is taking place in our country with some cooperatives—graphic proof of genuine anarchy in this area. Let us say that a cooperative for building a cottage settlement receives the official right to

exist and has collected the money. And let us assume that it soon disappeared along with the money. Its members not only would not receive their cottages, but also would not receive their money, since we have no laws protecting the interests of the consumer.

[Popov] Does there exist any base for legislative regulation of market relations, or will our lawyers have to do everything all over again?

[Yakovlev] We have fundamentals of civil law, of course. I will remind you of how they appeared. During the period of military communism, there was not a trace of civil law. The NEP [New Economic Policy] gave rise to the first civil code of the RSFSR, drawn up with the direct participation of V.I. Lenin, who understood that it was impossible to switch to a new economic policy without such a document.

This was, in my view, a magnificent code. But in the early 1960s we repealed it and issued another, which was much worse. You see, one was intended for a market economy, and the other for the command-administrative system. It was not sufficiently studied and had many weak points—on transactions, on the procedure for concluding and executing contracts, and on insurance, credit, mortgage, and other relations. Such is the paradox which life has presented us. Therefore, we will have to discard from it that which has disfigured its essence and fill in the gaps in order to obtain a full-blooded code, which we sorely need.

True, a little has already been done and is being done. I have in mind the laws on ownership, leasing, land, and enterprise, and the preparation of acts on joint stock companies, all sorts of associations and partnerships, banks and the banking system, securities, investment activities, fundamentals of anti-monopoly legislation....

In short, intense work awaits us. And it cannot be put off to the distant future. Legal and legislative regulation of the market will have to emerge in our country as soon as possible. Furthermore, development of this regulation must be done before formation of the elements of a market economy: delay in the action of regulators can result in serious interruptions in the economy. That is to say, preparation of individual legislative acts to regulate certain segments of market relations will be accomplished in parallel with creation of the entire system of civil legislation, in which deficiencies are not permissible.

Of course, in addition to civil legislation, labor and social legislation will also have to be improved. After all, concern for social protection of the working people is first and foremost. Simultaneously, we will eliminate elements of dependency and leveling. It is incompatible for a market economy when a person essentially does nothing but still receives wages and when a loafer cannot be fired.

I would even say that in a certain sense the market is a stricter regulator than command-administrative management. The thing is that it directly links the producer and consumer. The latter judges production by the quality and price of goods and makes his demands by increasing or decreasing demand. In conditions of planned management, one or another enterprise may achieve in instances a more favorable price and agree on indicators that are not as high. The market completely precludes such a possibility.

One additional comment. The transition to a new state in the economy will not take place immediately or instantaneously. This is a step-by-step process. It will not begin working at full force without formation of all the necessary regulation prerequisites. And finally, a market economy brings with itself more effective forms of economic activities and labor in the interests of people. Therefore, we should not be afraid of the market economy. But we should prepare properly for it.

CIA Data Quoted to Bolster Opposition to Market
904A0457A Tallinn SOVETSKAYA ESTONIYA
in Russian 7 Jun 90 p 3

[Presentation by Vladimir Yakushev, OFT co-chairman: "The Market: Ours or Theirs? Slow or Fast? The CIA Has Foreseen All This"; recorded by SOVETSKAYA ESTONIYA special correspondent Vyacheslav Ivanov at the third session of the USSR Supreme Soviet]

[Text] Vladimir Makarovich Yakushev is a docent of the USSR Council of Ministers Economic Academy and co-chairman of Russia's United Workers' Front (OFT). He is one of the most active opponents of the shift to market relations in the Soviet economic system. At the forum of USSR people's deputies, on which we are reporting, he spoke as an example of a different point of view.

To avoid potential complaints about distortions in the text of V. Yakushev's speech, we are printing it exactly as it was transcribed from the tape recorder.

If somebody wants to know about our (OFT) views, we are considered conservatives here, those who, when everybody is rushing to the market, keep them away. Personally, I want to say that this issue interested me because I, in my job, analyze foreign publications, or what they write about us. You see, I read there about our perestroika, as far as the market is concerned, a long time ago. I read the following: they ("they" from the point of view of foreign publications, i.e., "we"—Editors) should be allowed to engage in market relations, and they will kill them. (Meaning market relations will kill us—Editors) I saw a plan hatched to put an end to socialism. Because the correct development path is from market relations to **planned**; it is a universal process and it is taking place the world over. Even Lenin wrote that under imperialism planned relations supplant the market.

So if we could be persuaded that the market is our friend and introduce those market relations into the planned economy, they (meaning we—Editors) will perish.

So, in 1965, reforms took a first step toward the market and practically all our woes began then. Everything began to disassemble (probably meaning fall apart—Editors), because **plan** was combined with **market**, even though they are incompatible from the point of view of ideology.

Then, gradually, we got to stagnation. Now we want to go further, but now we will get chaos. Why? Because Pavel Grigoryevich (Bunich) still did not answer the main question, whether or not the market can **theoretically** regulate at a certain level of industrial development. According to economists—not only ours, in the United Workers' Front, but **theirs**, too, such as Galbraith—they believe that the level of industrial development in Russia—our, Soviet Russia—has **outgrown** the stage which can be regulated by market relations. Because the market is eliminated with the development of industry.

So we generally began to discuss and write about it. We gathered a rather large group of economists who think and reason differently (from Bunich and his supporters, presumably—Editors), who are trying to submit to the government an alternative program of reforms which would solve our country's crisis **today**.

Once I happened to see data of the Central Intelligence Agency—I follow them a little—and this is what they literally have written: **what** is to be done in their (i.e., our) economy and **what** could encourage a shift to market relations. The data was compiled in 1982. Just listen: "The shift away from the system of economic planning and flexible planned targets will greatly reduce the influence and control by the communist party and its leadership. For the Soviet Union, the market economy represents dangerous concessions in nationalities policy, since it will inevitably increase the role of local elements, including nationalist. The market economy will widen the gap between rich and poor regions in the USSR, some of which are quite explosive politically. This will undermine the position of the USSR as a unified superpower. The market economy will co-opt those politicians whose personal goals as consumers will begin to supplant the need to strengthen defense. For the USSR, the risk posed by the market is much greater than for small and structurally better balanced economies in Eastern Europe. The market economy threatens political stability. It cannot function without free prices. As a result, inflationary pressures which remain hidden today (let us remind you that the author means 1982—Editors) will surface. The economic and political impact of such developments need not be mentioned. A shift to the market economy will lead to unemployment; an all-encompassing market reform will threaten Soviet leaders with loss of control over foreign and domestic policy."

And when we finally take steps making the dreams of our respected opponents—I do not know, maybe they have

by now become our friends—come true, one sees that they foresaw it all. They had foreseen it even before we started our market reforms. So, some people foresaw it while we did not, right? So, when we found out about this whole situation, we decided to draft and propose a different concept.

Comrades, the whole problem of a concept is to find out where we want to go. If we are going, or moving, toward the market, it means that we are moving backwards. The market is capitalism before monopolies. We will destroy everything, and when we start moving from market to plan, then we will see some improvements. We will be destroying everything for about 10 years, and then we will see some improvements.

But if today we start moving toward the planned economy, the one we are now destroying, we will quickly see improvements. Look at the graphs drawn by the CIA: our decline began in 1961, but a sharp improvement occurred in 1983. What was that year? It was when Yuriy Vladimirovich (Andropov) came to power and said: "Let us think seriously about this issue."

If somebody wants it, we can present our concept: please, we are ready to work together with you. But, in general, harsh times lie ahead. We sense it strongly because we are connected with labor collectives and try to restrain them; we were able to prevent a strike by women at preschool centers. We were able to convince them, but those things are going to start soon. How? For whom? For whose benefit? I know what Comrade Tsipko wants: we have Marx, and he is the one we need. We have an ideology and we have communists. They are the ones we need. Yet, we hear it openly already, what they think should be done to communists.

However, we are serious: we are ready to work with you.

Editorial comment: It is difficult to debate the speech by the OFT activist docent V. Yakushev. His position so eclectically mixes elements of various doctrines that the general picture begins to lose shape. However, we would like to discuss two points.

First, there is much doubt about his transparent allusions to the fact that he and his supporters have been unable to reach the USSR government with their proposals. This is all the more strange since many of them, including Vladimir Makarovich himself, work at the USSR Council of Ministers Economic Academy and similar government entities.

Second, the theme of "CIA intrigues" and "those politicians whose personal goals as consumers will begin to supplant the need to strengthen defense" has a familiar ring. We have seen all this in our history: we have pilloried enough "base lackeys of imperialism" and sought enough "saboteurs" in industry in order to cover up and explain away pervasive mismanagement. We have been endlessly vigilant and intransigent toward

enemies and saboteurs. Except it has not helped us fill our store shelves and we have not become any more human because of it.

As to the market being supplanted by planned relations under imperialism according to Lenin, in those days it could well be true. (Incidentally, Otto Latsis in his speech stressed the use of planned distribution principles in the economy of Germany under the Kaiser early in this century.) But much water has flowed under the bridge since then, and the market continues to flourish everywhere in the world except in this country. As to elements of planning which exist in today's economies in the West and Japan, it is a special topic and we will return to it in more detail.

Support For Market Reforms Broken Out By Region, Social Groups

904A0470A Moscow NTR TRIBUNA in Russian
No 9-10, 1990 (Signed to press 27 May 90) pp 1, 12

[Article by V. Ivanov, scientific worker at the Institute of Slavic Studies of the USSR Academy of Sciences: "The Popularity of Unpopular Measures"]

[Text] The "free market," "competition" and "unemployment"—these then are the concepts which are presently exciting our society. Naturally, this sharpened interest by the population in the "political economics" of capitalism results from the group of measures prepared by the USSR Council of Ministers for improving the economy. A question that still remains to be decided—will we finally take a practical step towards a market and when? Why does this question remain unresolved? There is one reason—is society prepared for this today? We must still find an answer for this question.

In this regard, it is obviously of interest to analyze the results of an interrogation conducted by the Institute of Sociology of the USSR Academy of Sciences, following the adoption, during the 2d Congress of People's Deputies of the USSR, of the governmental program on measures for improving the economy and the stages of the economic reform.

Without pretending to provide a comprehensive analysis of the opinions expressed by our Soviet people, permit us to cite some data obtained from an all-union interrogation carried out in 13 cities and also in eight rural populated points. In all, more than 5,000 individuals were interrogated using a representative sampling of questions. And in view of the trend taken in the publication, we have singled out the opinion expressed by those representatives of the engineering-technical intelligentsia who were interrogated.

Thus, what did the interrogation reveal? In the various regions, it did not simply evaluate the processes taking place in society. In our opinion, this underscores both the differences in the character and rates of the restructuring processes in the regions and also the heterogeneous nature of the engineering-technical intelligentsia.

Selection of Possible Variants for Developing the Country's Economy (in percent of the number of persons interrogated)

Region	Social Group	Alternatives			
		Market Economy	Governmental Variant	Strengthening of Centralized Principles of the Economy	Experienced Difficulties in Answering
Moscow	workers	18.0	33.0	11.0	38.0
	ITR's*	41.0	36.0	10.0	13.0
	INP's**	48.0	36.0	-	16.0
Leningrad	workers	37.8	31.1	5.4	25.7
	ITR's	37.5	35.4	12.5	14.6
	INP's	52.6	26.3	5.3	15.8
Kiev	workers	30.5	27.1	3.4	39.0
	ITR's	54.6	25.8	2.1	17.5
	INP's	55.9	23.1	3.4	15.5
Tomsk	workers	55.0	25.0	5.7	19.3
	ITR's	60.2	20.4	5.3	14.2
	INP's	60.0	30.0	1.4	8.6
Irkutsk	workers	45.7	18.1	8.5	27.6
	ITR's	52.5	26.2	3.8	17.5
	INP's	51.9	29.1	2.5	16.4
Alma-Ata	workers	43.6	28.1	2.8	25.3
	ITR's	41.8	32.5	2.3	23.0
	INP's	44.0	35.8	7.4	11.9
Tallinn	workers	60.8	20.2	1.4	17.3
	ITR's	64.5	22.9	4.1	8.3
	INP's	79.4	10.2	5.1	5.1
Vilnius	workers	50.4	26.0	2.3	21.4
ITR's		70.2	15.8	3.5	10.5
	INP's	58.8	27.9	2.9	10.3

*Engineering and technical personnel

**Intelligentsia not engaged in production

On the whole, the evaluations of the status of affairs in the country and the degree of success realized during the process of socio-economic changes were extremely restrained. In responding to the question "Is perestroika justifying your expectations?", a considerable number of the ITR's [engineering-technical personnel] interrogated (from 40-43 percent in Moscow, Vilnius and Irkutsk and up to 56 percent in Alma-Ata) replied that "perestroika is only partially justifying their expectations." The proportion of pessimists was high. The lowest numbers of those who felt that "perestroika does not justify expectations" were found in Alma-Ata, Vilnius and Tallinn (23, 31 and 33 percent respectively and the largest numbers were found in Moscow (46 percent) and Irkutsk (52.5 percent).

One of the key aspects of perestroika is that it is the path leading to further economic development for the country. Given our present economic conditions, any half-way measures will only prolong the economic agony

and actually result in defeat of the reforms. Thus the governmental program for measures aimed at improving the economy and on the stages of the economic reform, as presented during the 2d Congress, aroused serious criticism among the radical portion of the people's deputies. These radicals were dissatisfied by the absence in the report delivered by the head of the government, N.I. Ryzhkov, of confirmation of adherence to the need for accelerating the reform process and advancement towards the market economy. They evaluated this program as a model of centralized planning dressed out in the clothing of perestroika, while noting at the same time that only a decisive turn towards the market economy could save the country from economic ruin.

Thus it turns out that the position taken by the radically attuned people's deputies of the USSR enjoys the support of a considerable portion of the engineering-technical intelligentsia. According to data obtained from our interrogation, from 48 percent of the ITR's in

Leningrad and Alma-Ata to 63-65 percent in Moscow, Tomsk and Irkutsk either completely or for the most part approved of the work being performed by the deputies of the inter-regional deputy group at the Congress.

The replies by the respondents to the question regarding the selection of the possible variants for economic development were extremely instructive. Although the evaluations fluctuate according to the region involved, it can nevertheless be stated simply that the method of "strengthening the centralized principles of the economy," that is, an actual return to the administrative-command mechanism, is supported by not more than 4-5 percent of the ITR's interrogated. Strangely enough, an exception in this regard turned out to be the ITR's interrogated in Moscow and Leningrad, among whom one out of every ten favored strengthening the centralized principles of the economy. As regards the alternatives—"the immediate introduction of market relationships" or "economic reform of the government by stages"—here the opinions were divided. The largest proportion of advocates of radical economic reform was found among the ITR's in the Baltic. The least number of advocates of radical measures along the path leading to a market economy once again were found strangely enough in Leningrad and Moscow.

Certainly, given the present dynamics of social consciousness throughout the country, even several months is a considerable period of time. Thus only subsequent sociological interrogations can furnish an answer as to what the true picture is at the present time.

Greater Role Foreseen for People's Control Under Market Conditions

904A0464A Moscow PRAVDA in Russian 1 Jul 90
Second Edition pp 2, 3

[Interview with G.V. Kolbin, chairman of the USSR People's Control Committee, by A. Golovenko and V. Yemelyanov: "Who Does Not Need Control?"]

[Text]

[PRAVDA] Genadiy Vasilyevich! Quite recently there were debates about the benefit from the establishment of a unified control system in the country under the aegis of the People's Control Committee of the USSR [KNK]. There were even appeals for the merging of the systems for party and people's control. Today a polar point of view is becoming popular: on the lack of need for control under the conditions of the transition to a regulated market. Many readers of PRAVDA and local controllers are completely bewildered by such a turnabout.

[Kolbin] You see, just a year or so ago the system of people's control was seen as a convenient forum for criticizing the existing order. Today all of us have changed. As you know, amendments have been made to Article 125 of the Constitution of the USSR, according to which the work of people's control is now guided by

the president of the USSR and the USSR Supreme Soviet. Control must be independent and not everyone is pleased with this.

The content of the work of the USSR KNK has changed noticeably in recent times. Work under the conditions of the presidential structure of management requires more than the usual verification from us—done or not done—but an in-depth analysis of the accomplishment of different state social and economic programs.

[PRAVDA] Which programs, for example?

[Kolbin] I will tell about only one of them. In accordance with the government decision on the modernization of the processing enterprises of the agro-industrial complex [APK], our country has received loans amounting to a total of about 830 million rubles in freely convertible currency from banks of the FRG, Italy, Japan, Austria, France and other countries for purchases of imported equipment. The interest rates on the loans average more than 8 percent a year and applied to the volume of received loans this is about 290 million foreign-exchange rubles. As a result, the total expenditures for the purchase of equipment and the payment of interest on the loans will exceed a billion rubles. The payments on the principle of the loans begin as soon as this year and next year for most of the agreements. But for what, strictly speaking, should we pay if there is no yield?

[PRAVDA] And did you stipulate this?

[Kolbin] Yes, according to the government decision, the capacities, for example, for the production of liquid margarine, for which 86 million in equipment was purchased, must be introduced this year. And what do you think? Not a single line is working to this day. In Moscow, where in the next two years it was planned to put into operation 37 sets of imported equipment costing almost 160 million rubles, many facilities, by all appearances, are destined to be under construction for a long time. The losses from commodities not received will amount to about 20 million rubles. How can we ignore such flagrant mismanagement? And who will put a stop to it if not people's control?

[PRAVDA] Does the government know about this?

[Kolbin] It knows. Under the current conditions of "self-control," however, none of its members is prepared to take himself to account. So the USSR Supreme Soviet is supposed to do this? But precisely it is in ignorance, although many deputies justifiably think that the large loans that we are talking about must be made with their knowledge.

In foreign countries, parliamentary control bodies prepare competent conclusions about the formation and execution of the budget. Here, in the sense of Article 125 of the Constitution of the USSR, the USSR KNK is an agency of this kind. But we have not yet been given the corresponding powers.

I will remind you that control in our country developed as public-state control, that is, it combined regular inspectors and a broad aktiv of voluntary helpers. With time, unfortunately, the emphasis was put on quantity. The task was set of having almost one-tenth of those employed in the national economy look after something. They have begun to call the people's controllers patrolers, it being unknown where this got started. When I hear this relatively trite word, I involuntarily imagine herculean bands of Muromtsy with binoculars in their hands. Vigilant scouts stand on watchtowers and make sure that no one pilfers or accidentally loses something at a plant, factory or kolkhoz field. Of course such a vulgar idea of the tasks of contemporary control evokes an ironic smile not only from me.

[PRAVDA] It is evident that the USSR KNK is changing its priorities. But our readers note that locally pere-stroyka is still taking place slowly. The work methods of people's controllers sometimes contradict life itself. Under the conditions of cost-accounting, self-financing and direct economic ties, is it necessary, for example, to rebuke a director for violating an instruction that inhibits his initiative?

[Kolbin] We are categorically opposed to formalism. Today our comrades need to involve themselves much more in an analysis of the orders and instructions from above. How correctly were they formulated? Will their fulfillment give the expected effect? And perhaps it is necessary to make amendments to the directive? In short, we must see our role in the critical interpretation of decisions made at the top. And from the position of the interests of the people.

[PRAVDA] But with our, to put it frankly, meager rights, we cannot do that much....

[Kolbin] That is right. I am convinced that today it is necessary to talk not about cutting back but about strengthening the people's control committees. I think that it would be justified in every way, even before the passing of the new Law on Control, to assign to the USSR KNK the task of verifying the correctness of spending funds from the union budget to maintain the state system, of utilizing budget appropriations for the development of production, the social sphere, science and technology and defense and of granting and implementing specific state loans to enterprises, associations and organizations regardless of their subordination and forms of ownership.

[PRAVDA] Our conversation is getting interesting. You are in favor of expanding the rights of the KNK. Meanwhile, from different forums and from the pages of some newspapers, one persistently hears the idea of the uselessness of the system of people's control in the country. Who is being unrealistic?

[Kolbin] Judge for yourself. They present ideas on the "uselessness" of people's control precisely when it has really begun to be reorganized and when it has started to work in close collaboration with the commissions and

committees of the country's Supreme Soviet and, as they say, to step resolutely on the tail of those who are trying to catch fish in the roiled waters of economic confusion. And I would add that it is when it is striving to ally itself with the mass media and to publicize the names of frequently very high-ranking persons guilty of mismanagement, waste and even open plundering of national property. We have already stopped "listening" to the large chorus of well-intentioned persons who under the pretext of concern about the "honor" of an oblast or branch try to protect the perpetrators of exaggerated reports and losses, who caused irreparable damage to the country, from their deserved punishment. They are trying to declare people's control "unnecessary" precisely when it is striving to lift the curtain in the system of the military-industrial complex and to get to the bottom of cooperative deals that produced gains for some and nothing but losses for others. This does not please everyone, of course. The previous protection of the guilty with the help of the telephone does not work any more.

[PRAVDA] Many of our readers are putting the question this way: Is it possible that under the banner of market relations some people simply want to affirm lack of control everywhere?

[Kolbin] I would not talk so categorically about the defense of the absence of control but attempts to free the guilty from responsibility are justified precisely through references to "market rules," free enterprise and the rights of collectives. It is precisely from these positions that they are trying at many levels to defend, for example, Ye. Rychin, people's deputy of the USSR and general director of the "Moskva" APK.

What is the essence of the polemics? In the interests of solving such an extremely important problem as the supplying of the city of Moscow with early vegetables, this manager signed a contract with a Bulgarian firm. Under this contract, consumers begin to pay not 70 kopecks for a kilogram of tomatoes, as before, but more than two rubles. It is possible that such an increase in prices is justified: such is the market. In its expenditures, however, the foreign partner foresees the free feeding of all the workers in their firm at the expense of the Soviet side. Why? Of 10,000 tons of tomatoes delivered last year, 2,000 turned out to be substandard and were rejected. Was it necessary for us to import a low-quality product from abroad? Why, despite the clearly exorbitant prices, did the contract not even provide for penalties against the supplier for goods of poor quality?

[PRAVDA] That is surprising kindness....

[Kolbin] Look further. About 40 percent of the delivered output was in the period when our own tomatoes were literally rotting in Astrakhan, Odessa and Volgograd. They could not move them out. Why did we have to haul them in from abroad? By the way, imported greenhouse tomatoes were sold to citizens of Moscow for three rubles a kilogram, whereas domestic tomatoes sold for

two rubles. The "Moskva" APK received almost two million rubles' profit under the contract. To cover the overall losses from this deal, we had to allocate more than 19 million transfer rubles from the state budget earned through deliveries of oil, cotton and other foreign-exchange commodities to Bulgaria. Were we supposed to react to the mismanagement in some way?

But just try, some newspapers saw us as striving to "suppress" initiative and enterprise. Not one of the defenders wanted to delve into the real essence of the matter. Otherwise they would have seen that in June and July our country received almost 44,000 tons of tomatoes at 40 kopecks per kilogram. And only the "Moskva" APK got them for two rubles a kilogram. By the way, Bulgarian tomatoes were sold in the FRG in April and May at one-sixth to one-third the price here. Not a single fact and not a single line of our decision is refuted but it is put into doubt. And the reader is led to a definite conclusion: the KNK is full of ignoramuses and bureaucrats.... That is, after all, another position.

When we try to verify the work of enterprises linked with cooperatives, we are certainly not seeking to catch someone in error or incompetence. No, we see another objective: developing in each manager joining the market a sense of great decency, obligation and honor as well as the need to learn enterprise and to put a stop to dependence on the state.

[PRAVDA] The readers of the newspaper are asking how well-founded is the opinion that the countries with a developed market economy get along without any control?

[Kolbin] I consider such arguments to be simply unserious. Let the adherents of the idea of no control not be offended by my harshness but the arguments that they present are simply evidence of profound incompetence. There is probably not a single country that does not have a control agency: people's, parliamentary, presidential or state—the essence is not in the name. It is apparent that few know that there is a world society of higher state control bodies—"Intosac." It includes representatives of 150 different states, developed and not so developed. All of them exchange the experience of their own work and the methods and organization of verification and assist one another.

[PRAVDA] And what specifically do they do.

[Kolbin] The control and auditing agencies of foreign countries primarily monitor the utilization of state funds and property. They verify the money that ministries, departments and other administrative bodies spend for their own upkeep and to implement state programs. And is all of this unnecessary for us with the introduction of the market? Everywhere in the world, they verify the legality, advisability and efficiency of expenditures. The accounting office of Austria, for example, is empowered to verify not only the entire state economy but also financial activities having to do with charitable and

other funds and institutions that are administered by agencies of the federation. Is this really superfluous for us?

Not so long ago the managing bureau of the Soviet Children's Fund examined the results of a check by the USSR KNK. In most of the cooperatives established under the Children's Fund, the overwhelming share of income went for wages. They amounted to 1,100 to 1,300 rubles a month for some workers. I am not going to say whether or not that is a lot. It is important that the methods applied for its receipt were not very fine. At times cooperative members purposefully reduced the sum of payments to the budget and transfers to the Children's Fund. Thus, last year the Moscow Grad Kitezh Cooperative concealed from accounting and failed to pay to the budget 284,000 rubles and 70,000 to the Children's Fund. At the initiative of the fund, payments to the budget by entrepreneurs of "Bambi" were reduced from 20 to 5 percent. They were counting on the cooperative raising its financial support to the fund. But this did not happen and the cooperative kept for itself the difference of 64,000 from the reduction of payments to the budget.

You are surprised at the boldness with which some cooperatives violate their own by-laws and contracts with the fund. Let us suppose that they provide for the carrying out of various actions for children but they themselves deal with publishing work, technical services and the like. Thus, the film studio imeni Ya. Korchak established under the Leningrad Section of the Soviet Children's Fund released advertising rolls for enterprises instead of producing films for children and young people.

Now you answer: Did we do something necessary or harmful when we opened the eyes of this public organization to the disorder in its own midst?

[PRAVDA] Gennadiy Vasilyevich! The adherents of the elimination of people's control have the following argument: its abolition will help to reduce state expenditures.

[Kolbin] This is either a naive fallacy or a conscious disinformation. The fact is that people's control is not on the back of the government but "feeds" its one staff, which, by the way, is quite small, and also provides a certain amount of income to the country. Judge for yourself. Last year a little more than three million rubles were spent in support of the system of the USSR KNK and 20 million rubles in illegally received bonuses and profit were returned to the budget in accordance with our decisions (I mean only the union committee). And hundreds of millions of rubles of unnecessary expenditures were prevented.

I am sure that with the transition to the market economy the role and economic importance of control agencies not only will not decline but will increase. In the United States, for example, a country of classical market relations, there is such a control body as the President's Council on Honesty and Efficiency in Government. Its

main task is to coordinate the actions of all control and auditing bodies in the fight against different abuses and in the realization of federal programs.

According to the annual report published in the press, the annual total of refunds to the budget after checks by this council exceeded \$330 million. Of this amount, \$116 million is attributed to the Defense Department. What are these figures made up of? A firm fulfilling an important order of the U.S. Defense Department for the project planning and production of a number of kinds of military equipment presented the department exaggerated data on the utilization of manpower. These write-ups, as we call them, were uncovered by a verification. The firm not only had to compensate the loss but also had to pay a huge fine. Do you see how controllers "feed" themselves in a market economy? Only who knows about this?

[PRAVDA] Clearly we can accept your reproach that we newspaper people talk very little about control systems abroad. Many of us are subject to the euphoria that the "market will put everything in its place." But the Russian deputies decided to abolish the KNK of the RSFSR. You know that the arguments of orators easily convinced the congress. Can there really be incompetence here?

[Kolbin] Read the shorthand report carefully and you will see how quickly the question of the elimination of the committee was decided. The opinions of the opposing side were simply rejected. There simply were no serious scientific justifications. I think that the deputies were the victims of emotions here. Let us look, for example, at what guided V. Babkin, former director of the Main Scientific-Technical Administration of the Ministry of Fertilizer and now general director of the Chernovetskiy Association "Ammofos." He got enthusiastic applause for the proposal that the means "saved" in the elimination of people's control agencies be used every year in the construction of something "as a noble monument to the People's Control Committee." That was mordacious. And some publicists are delighted with this mordacity. But its hidden motives are in the fact that with his resonant words "about monuments" V. Babkin seems to be hoping to put an end to some personal troubles and to remember some offenses. This "implacable fighter" against the command-administrative system was caught by a people's controller in actions that were by no means seemly. It is clear that in demonstrating a readiness for market enterprise he entered into agreements with a cooperative on the performance of research work for which there was no need.

[PRAVDA] Why do think so?

[Kolbin] Because almost all themes of the agreements had already been investigated and by a whole series of scientific organizations. Comrade Babkin knew this very well. He also knew that because of the lack of a research base the cooperative simply could not uncover anything new except the state pocket.

Despite the fact that practically no work was done under the contracts and no reports were presented, the ministry transferred 123,000 rubles to the account of the cooperative on the basis of the payment requests of the cooperative and attached acts of transfer and acceptance of work (again signed by Babkin).

A mistake? Were the evil cooperative members deceitful? No, they were grateful and found a temporary job in their firm for Babkin's wife. No trace remained of her work other than a financial statement on trips to Cherepovets and Sochi. And one other trifle: "Charged 2,000 rubles, received 1,600 rubles." So this was full price of the "project of annual monuments to people's control."

[PRAVDA] Yes, but in a number of places they took the elimination of the Russian KNK as "down with control" in general. But many did not agree. The Krasnogorsk City Council from near Moscow, say, elected a city KNK at its recent session. But now the deputies are bewildered: Why should there be such dictates from above? Some categorically declare: we need a committee!

[Kolbin] I think that the local councils must have their own control agencies. But what they will be called and what rights and functions they will have must be decided by each republic. It is important to understand that control is an integral part of management at any level, especially at the state level. Just as an aircraft is unthinkable without instruments showing the altitude, speed, fuel and, finally, the correctness of the course, any public system is inconceivable without its own control instruments, figuratively speaking.

I am very far from idealizing the work of the people's control bodies today. But let us consider that the shortcomings apparent to all were predetermined by the law under which we are still living.

We are prepared to relate with understanding to the most impartial criticism if the ardent speeches and pointed articles are imbued with real concern about improving things. After all, today it is not a matter of whether or not there should be people's control under the conditions of the market economy but of how it should be. And it is not difficult to guess who does not need it at all.

I think that now and in the future the primary basis for the work of our committees at all levels must be the strict observance of Soviet laws and the stopping of mismanagement, waste and bureaucracy no matter under which economic conditions they may be manifested.

PLANNING, PLAN IMPLEMENTATION

Methods, Institutions Outlined for Regulating Economy

904A0398A Moscow *PLANOVOYE KHOZYAYSTVO*
in Russian No 5, May 90 pp 62-72

[Article by V. Smirnov, I. Blinov, A. Vissarionov, and S. Sinelnikov, candidates of economic sciences: "Centralized Planning and Regulation of the Economy"; passages in boldface as published]

[Text] The people are deeply disappointed by administrative-command forms of centralized management. Since other forms have hardly been used, often any ideas of centralism pertain to anti-perestroika ones. Meanwhile, centralized management is inherent in any civilized society. Therefore, the question of the essence of centralism during the forthcoming transitional period is now especially urgent for our country.

As is well known, methods of centralized planning and regulation of the economy used in economic practice can be divided with a certain degree of conventionality into direct and indirect ones.

Direct methods of management are based on authoritative-order relations and boil down to the fact that the center tries to determine the state, line of action, and results of economic activity by economic agents (including enterprises). They limit the field of activity of enterprises and are of the nature of noneconomic compulsion and administrative obligatoriness. Direct methods differ in the degree of address nature and detailedness. Methods realized in the form of establishment of general economic legislation (it determines universal and group norms of behavior), which are obligatory on all participants in the management process and create the legal conditions necessary for a normal functioning of the economy, have the smallest degree of the above. As the address nature increases, they turn into administrative-command ones, which represent the most inefficient form of management.

Indirect methods of management are based on the fact that the center does not directly limit the independence of enterprises in the adoption of economic decisions, but reaches the outlined goals, creating economic interest in some actions and a lack of interest in others. The effect of indirect methods on the economy will be more successful if they are used to form general, not individual, conditions of management. The detailing and address nature of indirect levers (as of direct levers, if sensible limits are crossed) creates the ground for voluntarism and their transformation into a means of operational production management. At the same time, a loss of stability on the part of the system of economic levers, primarily normatives, and the application during its formation of the principle based on the attained level and so forth become inevitable.

Functions of Centralized Planning and Regulation of the Economy at the Present Stage

Under conditions of the expansion and intensification of economic reform centralized management of the national economy should ensure the performance of the following key functions: institutional formulation by supreme legislative bodies of the process of developing new production relations; performance of information-forecast, analytic, and goal-setting activity; formation of a macrostructure and maintenance of an economic equilibrium; social direction of the development of the economic system and the population's social protection.

The institutional function lies in a legal and organizational consolidation of new production relations by legislative bodies, establishment of management norms and rules, and formation of a corresponding organizational structure of management. First of all, there is a need for a formulation of the legal status and delimitation of diverse forms of ownership, creation of uniform conditions of management for them, and a clear definition of relations of possession, appropriation, and disposal and of the rules of establishment and abolition of enterprises. It is necessary to form a legal and economic mechanism regulating the relationship of state, leasing, cooperative, individual, and mixed enterprises and to work out conditions under which every form of ownership would function in the sphere where it brings the biggest economic effect.

In this work it is necessary to take into account to what degree the use of diverse forms of ownership is of a public nature and with what social and economic efficiency they function. The public nature of utilizing all forms of ownership (each in the area characteristic of it) should be ensured by an adjusted economic and political mechanism. The greater the degree to which the management and functioning of the economy are carried out on the basis of the people's interests, the greater the extent to which ownership is of a socialist public nature. Such a functioning of the economy can be ensured only through the development of the people's genuine self-management at all levels of the economic and political hierarchy and creation of effective public control over democratically formed bodies carrying out management "on behalf of the people."

Urgent measures should include bringing organizational structures of management into conformity with the requirements of a competitive economy, elimination of the multiplicity of links, parallel nature, and duplication in state bodies for the management of sectors, reduction and consolidation of sectorial ministries, and change in their functions (first of all, abolition of their authoritative-order economic functions).

It is also necessary to form economic institutions corresponding to a **regulated market**, which would service the functioning of an interrelated system of markets for products, resources, information, investments, and securities. As the unallocated and unlimited sale of products develops, the need for a network of commodity

exchanges, elaboration of the rules and principles of their functioning, and change in the structure and status of material and technical supply bodies increases. To ensure an all-Union circulation of securities, without which new forms of entrepreneurship will not be able to develop, at present it is necessary to more energetically engage in the construction of an all-Union network of stock exchanges.

The institutional activity of central bodies includes relations with mixed enterprises, regulation of the economic integration of domestic enterprises into a world market system, and transition to convertibility of the ruble. With regard to convertibility, under present conditions (inflation, deficit, and a low quality of products), in order to avoid the emergence of acute social problems, it is advisable to make the transition to it gradually. At first an intermediate currency, for example, the foreign currency ruble, should be introduced. It would gradually replace the ordinary ruble and other types of money on the internal market. In the future an exchange of the freely convertible ruble should be regulated centrally on the basis of a floating rate determined by the daily quotation on the currency exchange, by the state discount rate policy, and by the scale of currency operations on the open market. Furthermore, the state can maintain the rate of the ruble at the necessary level by means of commercial and special bank obligations to keep a certain percent of the attracted funds in USSR State Bank accounts (policy of mandatory reserves).

Institutional activity also includes the economization of relations, which are of great importance for a balanced and efficient development of the economy as a whole, but do not possess an adequate economic form. Lending the commodity-money form to these relations, the center gets the opportunity to purposefully affect them with the goal of attaining a socioeconomic and ecological equilibrium. For example, at present there is a need to economize the distribution and consumption of all types of resources, obtained effects, or the damage from their use. First of all, this involves the introduction of a charge for resources (material, labor, natural, financial, and information ones) and of compensation for causing various kinds of damage, environmental pollution, and so forth. At the transitional stage there is an acute problem of allocating and withdrawing differential rent income resulting not from the efforts of an economic subject, but through the use of more efficient and scarce production, natural, and other resources.

The information-forecast, analytic, and goal-setting activity of central economic bodies lies in the fact that they determine the qualitative priority goals of economic policy on the basis of analyzing the functioning of the national economy and developing variant macroeconomic forecasts of the dynamics of key material and financial proportions, directions in structural shifts and in scientific and technical progress, the movement of basic production factors throughout forms of ownership, economic spheres, sectors, and territories, tendencies in the change in the way of life, revenues, levels and ratios

of prices of key goods and services, domestic and world market conditions, and so forth. This information is presented to sectorial and territorial management bodies and enterprises. However, it is of an exclusive reference nature and does not limit their independence (primarily that of enterprises) in the area of planning and current economic activity. It should serve to ensure the adoption of substantiated decisions by enterprises.

In addition to information significance, indicative planning performs a coordinating role, that is, it presupposes a partial coordination of the activity of the center, sectors, and enterprises in the process of independent development by the latter of their production program. Therefore, the national economic plan should be of a flexible and open nature, which is especially important during the period of significant structural shifts, crisis phenomena, unstable market conditions, and unpredictability of scientific and technical progress. As reform develops, it will lose its directiveness in the part of address assignments. Outside the framework of the state order the national economic plan will become the sum of plans of enterprises, which they independently revise in accordance with economic conditions. It is advisable to give in it a forecast evaluation of the movement of key proportions and parameters in socioeconomic development so that ministries, departments, and enterprises are informed in advance of the basic directions in national economic development.

The five-year plan, in addition to the indicative part, includes the directive part, to which the budget plan belongs primarily (it should be built according to the principle of a sliding five-year plan—annually subjected to a refining correction and moved forward by 1 year), parameters of the tax system, depreciation rates, bank interest on refinancing, and developments concerning the state order (composition, shares, and quotas of the state order according to types of products and centrally set prices of products of the state order), and so forth.

Within the framework of such a planning system a desynchronization of plans of various levels, sectors, and enterprises is preferable. Independently formed plans of enterprises are developed for a period, during which the goals of every type of production are realized. Such periods are differentiated according to sectors and spheres of the national economy in connection with their objective specific nature.

The formation of the macrostructure and maintenance of the national economic balance, which ensure a socioeconomic and ecological equilibrium of social development, should be carried out both by direct (basically, of a legislative nature) and indirect methods of centralized management (financial-credit and tax policy, regulation of prices, and so forth). Under present conditions the role of financial methods and of the budget policy increases significantly, including in the area of regulation of macroeconomic proportions.

It seems that the effects on the structure of the economy needed from the government's point of view will be carried out in the budget policy basically not through direct investments from gratuitous centralized allocations, but by establishing a developed system of tax benefits, state guarantees of long-term credit investments, subsidies for making up for the difference in purchase and sale prices (within the framework of state purchases of products), compensations for a certain share of costs in low-profitability infrastructure- and science-intensive sectors, subsidies for measures connected with an economic risk and possible losses during an expansion of the production of a new advanced product, preferential conditions for attracting foreign capital (export bonuses and subsidizing interest rates on export credits), and so forth. At the same time, the choice of the most efficient concrete forms of effect on economic structures is the task of budget planning bodies.

In the course of budget planning, when determining the volumes of and directions in centralized investments within the framework established in accordance with budget legislation, provision should be made for an allocation of funds for forming the production potential and social infrastructure in lagging territories and regions. Here, however, we must not forget the permissible lower level of efficient utilization of state funds in order to prevent increasingly inefficient decisions on the development of territories from slipping down into an oblast. Social efficiency is possible only on the basis of high economic profitability. When republics change over to self-financing, the investment of funds in the development of territories in excess of a certain minimal level should be realized to an ever greater degree from the republic and local budget.

As reform expands, subtler methods of centrally regulating the macro-, sectorial, and territorial structure, which seem preferable from the standpoint of a financial improvement in the economy, are becoming possible. For example, central planning bodies, forming the system of state orders for the commissioning of capacities, initiate the establishment of new enterprises in sectors, whose development ensures advanced structural shifts in the national economy over the long-term period. However, long-term goals can come into conflict with the financial resources at the government's disposal. Therefore, after the commissioning and stabilization of functioning these enterprises can be denationalized, leased out, and so forth. Thereby, the center, directly managing the development of the economic structure, does not incur big expenses on ensuring its current functioning.

The organization of the circulation of securities makes it possible to carry out state financing for the development of priority types of production facilities by buying up their shares. This makes it possible, not limiting the economic autonomy of enterprises, to make centralized investments of funds. In urgent situations the state gets the opportunity to affect the management of enterprises as the holder of a package of shares. Such a form of investment lends centralized investments a returnable

and profitable nature (appropriation of dividends by the state). The nature of return of invested funds also changes. The state can return them to itself not only as dividends are received, but by selling shares on the exchange.

Changes in planning the expenditure part of the budget also presuppose adequate processes in the mechanism of formation of its revenue part. At the same time, the realization of fiscal goals should not contradict the tasks of regulating economic dynamics and of ensuring social support for the population. Among the forms of mobilization of financial resources the corresponding tax and depreciation policy, privatization of state enterprises, state loans, social insurance contributions, and so forth should be envisaged separately in the plan.

The tax policy, being an integral part of budget planning, appears in the form of an independent lever of management as a system for stimulating individual types of activities through the establishment of tax allowances and benefits, as well as for unstimulating through excises. At the same time, the general level of tax withdrawal is determined by the amount and urgency of general economic needs and the scale of disproportions in the national economy, which are to be eliminated, and by social policy tasks during the planned period, whereas the specific tax apportionment, by the need to stimulate structural changes in certain economic sectors and by the demands for ensuring an equal intensity (also with due regard for social considerations) of the tax withdrawal for individual payers.

Credit and financial regulation has as its object the ratio between the mass of commodities and the mass of money (by the mass of money is meant all types of securities, which either themselves are money, or under certain conditions can perform the functions of money). A violation of this ratio, which is expressed in the entry of surplus unbartered instruments of payments into the money turnover, signifies, first, the formation of indefiniteness in planning the prospects for the production activity of labor collectives owing to the shortage of commodity stocks and the increase in their prices (that is, impossibility of determining the future level of enterprise profitability); second, a gap in the interconnection between the results of labor activity and its basic incentives—personal income and social benefits received by individual production collectives. Under these conditions it becomes more profitable for enterprises to concentrate their efforts on redistributing the mass of money by means of various speculative operations, excessive prices, structural shifts in the products list, and so forth.

A change in the mass of money is the result of regulation of cash (bank notes and treasury money) and deposit-check emission. The former is determined by a decision of the Union government and the second is brought about by the effect of the extension of credit for the budget and enterprises by the banking system. A normal

credit and financial regulation of the economy presupposes ensuring flexible servicing of the national economic turnover with a strictly necessary sum of money, that is, maintaining a material and financial balance. This requires abandonment by the state of an automatic extension of credit through emission for budget and enterprise expenditures. In such a case the two-level banking system existing in all developed countries serves as a sufficiently reliable barrier. It consists of a central emission bank (the upper level) and commercial banks and other credit institutions (savings banks, investment and insurance companies, and so forth), which form the lower level. We must also carry out reform of the banking system, that is, create two levels of banks, a securities market, and a mechanism of their realization.

There are three methods of regulating the mass of money in circulation: operations on the open market, a change in the normatives of mandatory bank note reserves in accounts of credit institutions in the central bank, and pawnbroking registration policy. Under conditions of the strongest material and financial unbalance, which takes place in the country at present, the latter seems ineffective, because it is based on commercial credit or pawning of commodity stocks, which under conditions of the money surplus cannot be developed seriously. Therefore, as it seems to us, only the first two types of regulating the mass of money are possible now.

At the present stage operations on the open market can appear as the basic regulator of the mass of cash. Putting into circulation either securities, for example, state loans, at a high interest, which takes into account the inflation level, or drafts secured by a stable foreign currency, and selling them at a free market rate will lead to a concentration of a significant part of the ready cash in the hands of the central bank. The policy of mandatory cash reserves of credit institutions in the central bank can ensure a reduction in the volume of refinancing, which will make it possible not to put into circulation money withdrawn through the sale of securities. For this for every credit institution a ratio between the amount of its ready cash kept in the central bank and the volume of deposits (depending on the term of deposits) is established (in a differentiated manner, depending on the nature of active operations). When the normatives of mandatory reserves increase, banks, in order to maintain their liquidity, will be forced to curtail active operations, that is, to reduce the volume of credit extended to enterprises, which limits the volume of the mass of money. Thus, tools of regulating the mass of money exist and they should be put at the head of centralized economic management, because the material and financial balance determines the very possibility of utilizing economic methods of management.

Under conditions of the developed market such parameters as prices of a significant part of the products, depreciation allowances, bank interest, and so forth can be formed on the basis of self-regulation and without a direct effect of the center. However, an imperfection of the market and numerous monopoly and external

effects, which objectively limit cost-accounting relations, always occur in real life. In connection with this the formation of a significant part of the indicated parameters through market self-regulation alone is insufficient for a balanced and efficient development of the national economy. Therefore, there is a need for their centralized planning and regulation, that is, establishment of a system of indirect centralized market regulation, which should also include taxation, payments for resources, granted subsidies, and so forth.

During the period of reform implementation, when there is economic instability, of special significance is the center's activity on ensuring a social direction in economic development and on establishing a system of social guarantees for the population and protection for part of its strata against socially unacceptable consequences of the functioning of market elements.

Budget expenditures on social and cultural measures should not serve the goal of "supporting" a certain sector of the nonproductive sphere, be it education or public health. The basic task of budget financing is to ensure equal access for all the strata of the population without exception to a certain institutionally guaranteed level of medical services, education, housing conditions, and physical culture (irrespective of the income of these strata).

Proceeding from this, within the framework of the developed social programs and budget funds allocated for the development of the social sphere all-Union and republic ministries of health, culture, education, social security, and so forth form the system of state orders for commissioning social infrastructure projects and producing socially significant products and purchase them. First of all, this concerns inexpensive goods for social groups with fixed income and goods for children and disabled people. It is advisable to finance a significant part of such expenditures on social needs from local budgets.

Centralized bodies should ensure indirect management of the decentralized development of the social sphere, carrying out the tax regulation of the amounts of funds allocated by enterprises for social development. When planning corresponding normatives and tax scales, it should be taken into account that funds for the social development of enterprises are used both to stimulate an efficient operation and to form the capital of public consumption funds, which should guarantee the established minimum for meeting certain socially significant needs of all workers regardless of the labor contribution, workplace, occupation, and so forth.

The national economic plan should provide for and constantly implement in practice—from once to several times a year, depending on the rate of inflation—a correction of the population's income (especially that of social strata and groups with fixed income), which ensures that the increase in retail prices is taken into account. It is also necessary to follow the dynamics of the

subsistence level and to guarantee the minimum per-capita income level from especially allocated state budget funds given out directly to the population. Such payments should be of an address and strictly social nature (unemployment benefits and benefits for badly-off and large families, scholarships for students, and so forth), but not serve as a compensator for low labor productivity (for example, subsidies for the production of food, coal, and so forth). Otherwise, the budget will stimulate an inefficient structure of labor expenditures in the national economy.

During the transitional period central bodies should direct special attention to the solution of social problems connected with forming the employment structure, training and retraining personnel, ensuring the mobility and migration of manpower, and creating new workplaces and an appropriate social infrastructure.

Centralism at the Stage of Transition to the Socialist Market

Objectively, the formation of a new centralized economic management model interacting with the market mechanism of self-regulation will take a very long time. However, a number of its constituent characteristics should be formed in the next five to seven years. Otherwise, (with a more gradual transformation of the economic mechanism) the probability of adaptation of the administrative system to the realized innovations and emasculation of their essence increases significantly.

Proceeding from the above stated, it seems that the formation in general outline of the new mechanism of management, not the attainment of high qualitative indicators of economic growth, should be the main goal of the next five-year period. This signifies the need for the accomplishment of two interconnected tasks: attaining a material and financial balance of the economy (since an unbalanced economy does not lend itself to management by economic methods), organizing the process of a step-by-step expansion of enterprise independence, and displacing administrative command methods by new forms of centralized management.

At the initial stage of reform it is necessary to implement immediate measures for a financial improvement in the economy and, first of all, to discontinue financing with instruments of payment for losses caused by defects in the macrostructure of the economy, inefficient management of enterprises, and ineffective capital investments. This requires the following: to complete the establishment of a two-level banking system with the USSR State Bank, which is independent of the government and functions exclusively within the framework of a special law; to eliminate during one or two years the state budget deficit by reducing budget allocations for capital construction and subsidies for food production with a simultaneous liberalization of prices of agricultural products; to form a securities market, which will enable enterprises to mobilize financial resources under conditions of hard constraints on the dynamics of the mass of money.

For an organization of a step-by-step formation of the market economy it is necessary to fundamentally change the existing approach to the formation of state orders and the system of economic normatives. The state order in its present form has retained all the features of the administrative-address presentation of consolidated planned assignments. When instead of assignments for production in physical terms the new concept of "state order" was introduced, the thesis that only part of the production program of enterprises should be subjected to direct management from above was the main one in the substantiation of this step. However, practice has shown that it is impossible to limit the sphere of centralized production planning without a change in the entire technology of material and physical planning. If, as was the case in 1988, the sphere outside the state order established by the center was negligible, it was absorbed by ministries and USSR Gosstab bodies. However, the sharp reduction in the share of the state order in 1989, under conditions of an economy unprepared for this, required the introduction of an additional tool—"consumption limits," which together with the state order completely centralized the production and sale of products.

In our opinion, when developing the long-term model of the state order, it is necessary to proceed from the fact that the center cannot know and, consequently, assume the responsibility for determining and meeting all the diverse public needs. However, among them there is a group of needs, which is unified under the name of general state needs. The state budget is the financial source of meeting them. Precisely their material security should be provided by means of the state order mechanism. With such an approach the objective limit of the state order is outlined strictly and it is no longer necessary to set it administratively. The share of the state order will be automatically determined by the scale of redistribution of the gross national product through the state budget. After deduction of part of the budget resources used through other channels the share of the state order could be within 20 to 30 percent of the production volume.

Although the share of the state order is comparatively small in the total production volume, it is vast in its assortment. The products list of the state order is determined by the structure of general state requirements in the area of defense, safeguarding of law and order, and international obligations and for the maintenance of the state apparatus, realization of major scientific research and developments, opening up of new territories, satisfaction of social needs, and so forth. For example, in the United States 90 percent of the entire products list of the market passes through the state order. Under such conditions the search for what not to include in the state order loses its meaning in itself. If, nevertheless, it is undertaken, this will be obviously artificial and harmful from the practical point of view.

Since the state order is concrete and varied in its assortment, it cannot be formed by one body. There is a need for a network of state bodies, which would exercise

the right to its formation on behalf of the state. The term "order," be it a state or a direct consumer order, loses its meaning and cannot be used without combining the functions of the client and the payer in one person. Nor can an order be accepted for execution other than by mutual consent of the parties (agreement or contract). Consequently, the order is based on interests, not on administrative coercion (directive or obligation). Interest in the state order is ensured not by the fact that it is financed with budget funds (as payers all clients are equal), but by the advantages of the big and reliable customer and, if necessary, by the levers of state regulation (tax, credit, and depreciation policy).

Thus, the main outlines of the long-term model of the state order look as follows:

- the functions of the client, the payer, and the consumer are combined in the person of the state, which delegates its rights to appropriate institutions;
- the volume is limited to the amount of allocated budget funds.
- the specific composition is determined by the structure of general state requirements.
- moreover, voluntary nature, mutual interest, and competitiveness are inherent in any "order."
- contract prices.
- strict liability as to property for not executing an order.

The transitional model of the state order should be based on these principles and strive to realize these principles, deviating from them only to the minimally necessary degree required by the present state of the economy (first of all, the strongest material and financial unbalance, as well as the monopoly position of state property and of the overwhelming number of producers). With due regard for these considerations during the transitional period the consumer's specific order established by it for the producer enterprise within the centrally allocated quotas (limits) of the product it needs should be called the state order. In the proposed model both state bodies giving out the order for budget funds—the budget order—and individual enterprises—the horizontal state order—appear in the role of the consumer. Since budget funds are formed into Union, republic, and local budgets funds, state orders should also differ in their levels—Union, republic, and local. In case of the horizontal state order the term "state" is used not in the sense of a body presenting the order, but from the standpoint of a state guarantee for specific needs. This order is ensured by the limit and its execution is obligatory.

Products produced outside the framework of the state order should be sold at flexible free prices determined by supply and demand. For the purpose of developing market relations the share of the state order for resources from cost-accounting sources will be reduced, narrowing the sphere of directive production management. The

establishment by the consumer of a smaller volume of quotas (limits) than during the preceding period will make them change from the issue of assignments to the development of contractual relations with producers. The withering away of this form (horizontal) of the state order will simultaneously signify a sufficiently developed state of the socialist market, which will make it possible to get rid of directiveness and limitation of the budget state order. Thereby, the transitional model will smoothly turn into a long-term model of the state order, fully corresponding to the above-stated principles.

The transformation of presently applied economic norms into a tax system plays a major role in the organization of the transitional period. For this individual norms, which determine mutual relations with state and local budgets, should be made stable and be formed according to uniform and accurately determined rules, which make it possible to ensure uniformity of the tax withdrawal.

In our opinion, the tax system for state enterprises should include the following: payments for productive capital; payments for labor resources; deductions for social insurance; payments for natural resources, including a charge for ecological violations arising in the course of production activity; taxes regulating the use of resources for consumption and accumulation by enterprises; local taxes; indirect taxes. Furthermore, it is necessary to develop rules of granting special tax privileges, which make it possible to selectively ensure varying profitability of individual types of economic activities noted for national economic priority.

At present the introduction of uniform taxes for enterprises throughout the national economy, or at least in its individual sectors, is hampered by the strongest differentiation of enterprises in terms of profitability. Therefore, the construction of a single tax system during the transitional period should link the process of toughening the requirements for efficient work (that is, the process of tax unification) with displacement of administrative methods of management by a market organization of the economy. For this it is necessary to envisage an annual change in differentiated (according to groups of enterprises) tax scales so that by the end of the transitional period the differentiation could be overcome. Of course, it is a matter of clearly setting stable (in the sense of the possibility of revising them), but annually different, tax rates in the five-year plan, not of annual corrections of norms. Such norms of deductions from profit for groups of not sufficiently profitable enterprises should increase every year and for highly profitable groups should decrease to an average level, thereby creating conditions for the development of competition.

The transition to a uniform taxation system is to be made as of 1991, that is, without an appropriate preparation. However, in our opinion, with all the external progressive nature of such an approach it will bring about extremely negative consequences, in particular a run of bankruptcies during a brief stretch of time, which

is economically inefficient and socially inadmissible. Hence there will be numerous deviations from a uniform approach. A significant redistribution of the income of enterprises through the mechanism of subsidies and various kinds of tax rebates will be completely inevitable. As a result, uniform taxes will differ little from an individualized system of normatives. Owing to the mass nature of demands for an individual approach to granting tax rebates, subsidies, and so forth (since their amount should be determined depending on the possibilities of implementing the necessary measures to increase the profitability and to strengthen the status of an enterprise), the interference of ministries in this process with all the ensuing consequences will become inevitable.

Both the varying profitability of obligatory administrative assignments presented to enterprises and the different provision with production resources (capital, personnel with the necessary skills, natural raw materials, and so forth) are factors in the differentiation of enterprises in terms of profitability. Accordingly, the uniformity of taxes can be ensured, first, by giving up the use of mandatory assignments and, second, if objective differences in economic management brought about by a dissimilar provision with resources are evened out. However, the displacement of administrative methods of management by market relations under conditions of an unbalanced economy objectively requires a certain transitional period. With regard to an unequal provision of individual enterprises with resources only the functioning of a developed (and centrally regulated) market, under which individual production factors receive an adequate economic evaluation, can properly even out the corresponding differences in management conditions.

If a corresponding level of development of commodity-money relationships is absent, it becomes necessary to use centrally established payments for production resources. In principle, however, it is impossible to

centrally determine the indicated payments with the necessary accuracy. The lack of an objective mechanism of evaluating the potential efficiency of the resources used by an enterprise (in particular, the mechanism of reassessing the value of fixed capital and of assessing the effect of labor activity and rent factors) requires the use of differentiated normatives of the charge for resources (capital and manpower) at several groups of enterprises with varying profitability. According to existing evaluations, the setting of differentiated rates of payments for resources makes it possible to even out management conditions to a significant degree. In this case the use of group values, or of a progressive tax rate on net profit, makes it possible to overcome the individualization of the tax system with the exception of mutual relations of the budget with unprofitable enterprises.

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INVESTMENT, PRICES, BUDGET, FINANCE

Goskomtsen Uncovers Record Number of 'Illegal' Price Hikes

904A0350A Moscow *EKONOMIKA I ZHIZN* in Russian No 19, May 90 p 18

[Article by V. Golovachev: "Our Price 'Leaps' Are Ever Higher"]

[Text] Producers of goods and services often use forbidden "stimulators" of price increases. In 1989, monitoring organs of the USSR Goskomtsen [State Committee for Prices], a kind of "anti-doping" commission, documented inflation of prices on goods and services by 184 million rubles in inspected state enterprises and institutions. This is an absolute "record" in all the years of similar inspections. The table below, published for the first time, reveals the sector components of this "record."

First-Ever Published Data on Efforts to Monitor Observance of Price Discipline in 1989

	Number of Enterprises Inspected	Number of Enterprises With Violations Revealed		Total Unjustified Profit (Income) and Penalties Transferred to the Budget as Income by Decision of Price-Setting Organs	Total Assets Transferred to the Budget as Income by the Enterprises Themselves on the Basis of Inspection Results, Thousands of Rubles
		Total	% of Total Inspected		
Industrial enterprises	7233	3659	50.6	103710.5	4404.8
Including:					
Republic and locally subordinated	4664	2281	48.9	54638.4	1157.6
Trade, total	42769	11112	26.0	15477.8	805.4
Including:					
State trade	19764	5599	28.3	10985.1	136.3

First-Ever Published Data on Efforts to Monitor Observance of Price Discipline in 1989 (Continued)

	Number of Enterprises Inspected	Number of Enterprises With Violations Revealed		Total Unjustified Profit (Income) and Penalties Transferred to the Budget as Income by Decision of Price-Setting Organs	Total Assets Transferred to the Budget as Income by the Enterprises Themselves on the Basis of Inspection Results, Thousands of Rubles
		Total	% of Total Inspected		
Consumer cooperatives	22822	5427	23.8	4173.2	79.9
Public food services	18616	6475	34.8	2123.5	461.7
Including:					
State trade	10334	3831	37.1	1618.0	74.8
Consumer cooperatives	8069	2637	32.7	505.4	86.9
Consumer services	14801	5219	35.3	2936.7	104.2
Municipal services	2971	1225	42.7	2326.1	106.0
Procurement activity	4290	2140	49.9	9519.7	2635.8
Including:					
Kolkhozes and sovkhoses	2760	1369	49.6	4387.7	1415.3
Motor vehicle shipments	1177	537	45.6	5578.8	154.1
Nonproductive sphere (culture, public health)	4646	2346	50.6	42493.4	1324.7
Total	96403	32716	33.9	184166.1	10504.3

But even the figures in the table do not reflect the true state of affairs. Price-setting organs, you see, directly check only a tenth of all enterprises in industry and services. And second, only those violators who were caught "red-handed" ended up on the "black list."

Nonetheless the total assessment given by specialists to the overall dimensions of illegal price hikes is interesting.

"According to our expert assessments," said S. Tryashin, first deputy chief of the Main Price Control Administration of the USSR Goskomtsen, "it is 1.2-1.5 billion rubles. Moreover the methods of price 'pumping' have recently become more sophisticated."

Stanislav Petrovich cited the following example. The Moscow Silk Combine imeni Shcherbakov (V. Brusnov, director) manufactured a certain fabric costing 20 rubles per meter. But one fine day the combine raised its price on this fabric to 65 rubles. And yet the raw materials and the spinning quality remained the same. Only the color of the fabric was changed a little.

In general, light industry enterprises are allowed to change prices when they change assortment—not to more than triple though, but by a maximum of 50 percent. In the meantime the combine not only jacked the price up but also reduced the output of this fabric by 60,000 meters. Still, the gain from selling the fabric at

reduced volume increased by several million rubles. Naturally the inspectors could not let such "adventures" go unnoticed. After evidence of all the violations was presented, over three million rubles were held back from the combine in favor of the budget by decision of the Goskomtsen.

The trouble that this started! The combine director went as far as the USSR Council of Ministers. Apparently he no longer has anything to do with the State Committee for Light Industry. And it was not until he received his deserved evaluation from the USSR Council of Ministers Bureau for Social Development that V. Brusnov finally settled down. But for how long? In Tryashin's words, you see, departmental control is practically absent in the State Committee for Light Industry.

But why didn't the enterprises that use the fabric of increasing cost express any outrage? Because they just raised the prices on their own articles. The Ashkhabad Clothing Factory for example raised the price of dresses made from it from 160 to 360 rubles. Thus it turns out that only we the customers suffered.

Such examples are boundless. According to data of the USSR Goskomtsen, light industry enterprises have leaped way out front among violators of price discipline. I would think that there is something here for USSR State Committee for Light Industry Chairman L. Davletova to ponder.

But even the former leaders in price disciplinary violations are still going strong. Thus, last year inspectors were astounded to discover in an audit of the railroad

system that there are no bounds to the creativity of the Ministry of Railways. The railroaders themselves rename old services without changing their content, and rake in the money from their clients. The Goskomsen inspected only two percent of the enterprises in the Ministry of Railways, and found that they had inflated prices by 20 million rubles. Naturally these 20 million, together with 17 million rubles in penalties, were transferred to the budget "pocket" following the inspection.

It should be noted that violators, who utilize various channels—from deputies to personal ties—are attempting to exert pressure upon the inspecting organs. The inspectors are withstanding the pressure for the moment. Will they be able to do so in the future?

"Yes," USSR Goskomsen Deputy Chairman I. Salimzhanov assured me. "Moreover this year the inspecting organs coordinated their activities under the 'flag' of the USSR Committee for People's Control. A 'Summary Coordination Plan of the Work of USSR Interdepartmental Inspecting Organs for 1990' was drafted for the first time. This year there will be fewer inspections, but they will be significantly deeper. Several inspectors will be taking part in them simultaneously, you see—from our committee, from the Committee for People's Control, from the Ministry of Finance, from the Ministry of Justice and from bank and other organs."

Let me conclude by citing a certain detail that is little known even to specialists. There are on the order of 6,000 state inspectors in the system of price-setting organs. All outlays on their maintenance total around 20 million rubles. In the meantime they return almost 10 times more to the treasury, including as a result of inspections of cooperatives. The question, then, is this: Are all apparatchiki really "superfluous"?

Central Investment Cuts Linked to Rise in Unfinished Construction

904A0479A Novosibirsk *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)* in Russian No 5, May 90 pp 88-99

[Article by Sh. B. Sverdlik, doctor of economic sciences, Institute of Economics and Organization of Industrial Production of the Siberian Department of the USSR Academy of Sciences, Novosibirsk: "The Cart Should Be Behind the Horse"]

[Text] Striking examples of the helplessness of central economic agencies in controlling investment were cited at a businesslike meeting in the editorial office of *EKONOMICHESKAYA GAZETA* (No 24, 1989, pp 8-11). A major portion of the 130 gigantic facilities (with a budget-estimated cost of 300 million rubles or more) that were listed as being behind schedule were started without engineering documentation and through preferential financing, when they were given as much as they asked for. The facilities that were not included in the

five-year plan were squeezed into the plans for construction and installing operations by willful decisions, an act that opens up powerful floodgates for new investment which will be sent to new construction sites at the expense of planned facilities already started. Thus, after approval of the current five-year plan, the construction of new facilities worth more than a trillion rubles, which is about equal to the total of all resources contemplated for the 13th Five-Year plan, was planned by individual decrees about the development of various branches of the economy or regions of the country. The USSR Minfin [Ministry of Finance] representative complained that now 10 billion rubles must be found somehow in order to implement these decisions, which were adopted outside the five-year plan framework. The USSR Gosplan [State Planning Committee] representative made it known that the decisions had been adopted in disregard of five-year plans without its (Gosplan's) participation, and then Gosplan each year reports to the government that these decisions will require such-and-such additional resources—material and financial resources and construction-organization capacity. Promstroybank [Industrial Construction Bank] receives the order to finance them and give them credit, which it does obediently.

What Does the Past Warn About?

Obviously, there is no necessity to prove that investment-policy effectiveness is determined not only and not so much by the financing mechanism as by the planning of capital investment, control of the provisioning of supplies and equipment, and organization of construction and the design and budget-estimating activity. It is a matter of something else—can and should the financing mechanism, using specific economic methods, exert a positive influence on the investment process or its role—or should it just reflect the negative consequences of these shortcomings in the financing and credit-granting plans of the state and in reports about their fulfillment?

The author of these remarks has always upheld an active role for the financing and credit-granting mechanism in controlling the national economy and, from these standpoints, examines certain results and prospects for a restructuring of investment policy.

The traditional sources for financing capital investment are budget grants, long-term bank credits, and the activity's in-house resources—deductions from profit, amortization for renovation, and some others. The activity's own resources, in turn, are subdivided into centralized funds accumulated by the ministries and agencies, and noncentralized resources which go into the fund for developing production, science and engineering, the social development fund, and other funds for economic incentives and similar purpose.

An analysis of the national-economic plan and the budget for 1990 indicates primarily a certain reduction in total capital investment and a reorientation thereof in

favor of the social sphere. As for structural shifts, a striving to cut budget expenditures and replace them with other financing sources is being felt. In so doing, while the government views a reduction in production-type capital investment in 1990 as a temporary, extraordinary measure and it intends, during formulation of the 13th Five-Year Plan, to sustain this investment at the required level, the displacement of budget grants by in-house funds and by creditgranting is a long-term strategy.

Let us take as a reference point the actual indicators for 1988, when capital investment reached its apogee. Total capital investment in the national economy from all financing sources was supposed to be 9.8 percent less in 1990—10.2 percent less in the production sphere, 8.6 percent less in the nonproduction sphere.

It is proposed that budget grants for the financing of all capital investment be reduced by 40 percent, fourfold the relative reduction of capital investment from all sources. Basically, this reduction concerns investment in the production sphere, where the objective limits for replacing budget grants by the activity's in-house funds and by bank credits are much broader than in the nonproduction sphere. According to our calculations, only a fifth of the investment for production purposes, which should support major advances in the national

economy and pave the way for scientific and engineering progress, will be covered from the state budget.

As is evident from the papers on the discussion about the draft of the national-economic plan and the budget for 1990, its drafters presumed that change in the structure of capital-investment financing resources and other measures for improving the situation in capital investment would enable known negative trends—the lags in putting fixed capital into operation and in growth of national income produced from the increase in capital investment—to be overcome in the near future.

Were these expectations justified? Is there proof of the advantages of decentralizing capital investment and of replacing budget sources of financing by the enterprise's own funds and by granting credit?

Theoretically, enterprise collectives should, as the proprietor of wage funds, be motivated to use them effectively to a much greater extent than "giftlike" budget grants. And actually one can find in the special literature examples that confirm the advantages of repayable interest-bearing credit from the bank in comparison with nonrepayable interestfree budget funds. But in moving from specific examples to the economy as a whole, the picture changes and it looks convincing, since the mechanism for forming capital investment during the postwar years has changed first in one and then in the other direction (see table).

Structure of Financing Sources for Capital Investment, the Introduction of Fixed Capital, and Growth of National Income Produced

	1959-1965	1966-1972	1973-1982	1983-1988
1. Average annual rates of growth of capital investment in comparable prices, %	7.6	7.4	4.3	4.9
2. Sources of capital-investment financing, %:				
Budget				
In the year preceding the reporting period	no data	48	37	41
In the last year of the reporting period	48	37	41	34
Average for the period	50	40	41	37
Credit				
In the year preceding the reporting period	no data	5	9	9
In the last year of the reporting period	5	9	9	6
Average for the period	4	7	10	6
In-house funds				
In the year preceding the reporting period	no data	47	54	50
In the last year of the reporting period	47	54	50	60
Average for the period	45	53	49	57

Structure of Financing Sources for Capital Investment, the Introduction of Fixed Capital, and Growth of National Income Produced (Continued)

	1959-1965	1966-1972	1973-1982	1983-1988
3. Average annual rates of growth of introduction of fixed capital, in comparable prices, %	6.7	7.3	5.1	3.8
4. Average annual rates of growth of national income produced, in comparable prices, %	6.8	6.9	4.7	3.6
5. Ditto, with a lag of 3 years	7.3	6.0	3.9	3.6
6. Item 5/Item 1	0.96	0.81	0.91	0.73
7. Item 3/Item 1	0.88	0.99	1.19	0.76

Let us group the capital-investment growth indicators and their effectiveness by time interval, which distinguishes the one from the other by substantial changes in the structure of their financing sources. The beginning of each interval coincides with the issuance of a government document on improving the economic mechanism.

From 1959 through 1965 half of the capital investment was financed from the budget. Taking into account the three-year lag between capital investment and its return in the form of increase in national income produced, the ratio of the rates of growth of these indicators was close to unity. At the same time, the introduction into operation of fixed capital lagged considerably behind capital investment, and uncompleted construction increased.

The period 1966-1972 was marked by steady growth in the share of in-house funds and of long-term credits and the supplanting of budget grants, which was manifested most strongly in the state sector, where the share of budget funds was reduced from 52 percent in 1966 to 41.6 in 1972, and the share of credits increased from 4.1 to 6.1, and in-house funds increased from 43.2 to 51.7 percent.

These structural shifts were accompanied by a worsening of the correlations between rates of growth of national income produced and capital investment. When the correlation that prevailed during the preceding interval was preserved, it was sufficient to increase capital investment by 6.3 percent in order to support actual growth of national income (with a lag), while with an actual growth of capital investment it was possible for national income to grow by 7.1 percent. Along with this, the correlation between growth in introduction of fixed capital and of capital investment was improved. It is true that this indicator is not very reliable because of the different evaluations of capital investment and fixed capital in so-called comparable prices. Logically, given such a correlation, uncompleted construction should decrease, meanwhile its share in the annual amount of capital investment increased from 71 percent at the end of 1966 to 78 percent at the end of 1972. The fact that the reexamination of budget-estimated prices for construction and installing work and the reevaluation of fixed capital were made in different years introduces additional confusion in these, interdependent indicators.

But be that as it may, growth of the specific indicators of uncompleted construction testifies to the fact that the replacement of budget grants by in-house funds and by credit has led to a dispersion of capital investment.

Obviously, it is this that has forced authoritative organs to turn back.

In 1973-1982 the share of budgetary funds grew gradually, and the share of in-house funds was reduced, while the share of long-term credits was maintained. As is apparent from the table, during this period the correlation between growth of national income and of capital investment improved, while growth in the introduction of fixed capital outpaced the growth of capital investment. During this interval the share of uncompleted construction as a percentage of capital investment volume fell from 78 percent in 1972 to 75 percent in 1975, and then rose to 91 percent in 1979 and fell again in 1982, to 84 percent.

Growing financial stress forced authoritative organs to make an ordinary move. Beginning with 1983, a relative reduction in budgetary and credit sources for financing capital investment was started. And again investment effectiveness fell sharply, and uncompleted construction continued to grow.

According to USSR Goskomstat [State Committee for Statistics] data, the share of resources of enterprise and organization funds in total state capital investment was 3.1 percent in 1986, 18.2 percent in 1987 and 40 percent in 1988. Meanwhile, with a 1.3-fold increase in state capital investment in 1986-1988 over 1981-1983, fixed capital put into operation through such investment increased only 1.2-fold, and the average annual rate of growth of national income produced fell in comparison with the preceding five-year plan.

In 1989 there were absolute and relative reductions of centralized capital investment and of budget grants, and the share of in-house funds of enterprises reached 49 percent. Nevertheless, this is precisely why indicators of capital-investment assimilation have worsened. The annual goal for introducing fixed capital into operation through state capital investment was carried out by 92 percent, the startup program for introducing the most

important production capacity into operation was disrupted, and this was one of the reasons for the lack of a materials balance in the national economy. Uncompleted construction reached a record 94 percent of the year's capital investment, and 39 billion rubles above the norm were frozen in uncompleted construction, aggravating the shortage of material and financial resources.

Possibly, with time, when at least the early stages of a market for funds for production appears, when enterprises at least begin timidly to compete with each other for conquest of this market, when investment-process participants are placed in a self-financing environment, compelling them to count the money, a reduction in budgetary centralized capital investment actually will yield the desired effect. Until these conditions have been created, the enterprises will have neither the motivation nor the opportunity to spend the development funds with the greatest advantage to the national economy. In 1987 only 71 percent of the funds for developing production, science and engineering were used for financing capital investment, in 1988 only 68 percent. Enormous sums of "roving" monetary resources are being built up on the books of the enterprises, and they will not be able to resist the temptation to convert this money which is on the books to cash on hand through cooperatives.

And what is to be done with elimination of the budgetary shortage? Superficially, a reduction in budget grants for capital investment is the shortest path to this goal. But this can lead to an opposite result.

An increase in the share of noncentralized capital investment, which is not provided with ceilings on construction and installing work and with funds for equipment and building materials, will intensify competition among developers and strengthen the dictates of the producers. There will be a new spiral in the increase of contractual and other temporary prices, and there will be an increase in separation of the real physical stuffing of capital investment and the introduction of fixed-capital from their cost evaluation. The pursuit of profit and of locally prestigious facilities will supplant the state order, which ideally should solve the country's most important problems.

An intensification of the negative phenomena that appeared in 1988 and, especially, in 1989, inevitably will lead to failure to get the profit and achieve the other monetary accumulations that were planned for 1990. In short, it is a fact that the state budget will save on capital-investment financing, and it will lose (if not more) as a result of the reduction in income.

The budget for 1990 indicates that its potential for increasing profit and for reducing nonproductive expenditures, particularly by the abolition of concessions, subsidies, and so on that do not justify themselves and that stimulated dependent attitudes and collective egoism on the part of the working collectives, are far from being completely exhausted.

Of course the budget deficit must be cut in part and by extraordinary measures, without, however, losing sight in so doing of the strategic aims for developing the economy. A reduction of centralized capital investment and of budget grants is, in our view, a strategic error, which, as has happened not for the first time, will be justified by the fact that not everything had been foreseen and something had not been considered.

What Prevents Turnkey Turnover from Being Considered?

Of the other measures aimed at increasing capital-investment effectiveness, the change in 1990 in the procedure for settlements among investment-process participants merits attention. Its essence is that settlements should, as a rule, be made for a finished construction product, that is, after enterprises or their phases or facilities have been put into operation. Prior to turning a finished construction product over to the client, the expenses of the construction organizations are covered through their own funds and bank credits. It seems that this is the end of the domination of the "gross"? But we shall not hasten to applaud.

A similar attempt had already been undertaken in the second half of the 1960's. The result was the opposite of what was intended. Uncompleted construction "migrated" from the developers' books to those of the contracting construction organizations. The working capital of these organizations in commodity-stock reserves increased from 4.6 billion rubles at the end of 1965 to 10.7 billion in 1970, to 32.2 billion in 1975, to 55.4 billion in 1980, and to 81.2 billion in 1985. Basically, all these reserves were bank-granted credits, since the contracting organizations never had been provided with their own working capital. They had to return to their average, or rather to proven monthly "percentages of building and installing work completed," which the developers paid for without looking, in order not to spoil relationships with the contractor, and then the latter cut back entirely the work, which was barely heating up, at the construction site. The uncompleted construction was returned to the developers' books, and in 1986 alone the contracting organizations' material reserves were "cut" from 81.2 billion to 27.3 billion rubles, credit-type investment from 110.9 to 43.4 billion rubles. Of course the uncompleted construction had not vanished, and the monetary resources frozen in it were dead. Then on paper everything was fine.

The "new" policy for settlements in construction repeated the errors of the reforms of the 1960's with precision, to a T. As is seen, exceptions were made that paved the way for fragmenting enterprises and other facilities under construction into startup-complexes, phases and so on, which had been constructed but were not ready for producing output or extending services. Why should credits be opened not only for the actual expenses of contracting organizations but also for profit not yet earned—for forming funds for developing production, science, technology and social development,

and also for making payments into the state budget? Why should the bank be the middleman who disunites the interests of the developers and the builders, who together should take responsibility for the timely introduction of facilities into operation? There are many such "whys," but indeed these "whys" arose several times in the 1970's and 1980's, and there was no comprehensible answer to them.

Of course the conversion to settlements for finished facilities after the clients accept them, and even better—after achievement of the designed production and economic indicators—is not a simple matter, especially when it comes to facilities whose standard construction period is lengthy, but this problem must be solved, otherwise the system of settlements will operate, as before, on gross uncompleted facilities and on fictitious profit.

The first obstacle to converting to turnkey settlements is the current sources of financing for uncompleted construction. Construction organizations must be allocated their own working capital in the full amount, without resorting, however, to budget grants (the deficit!). For this purpose it is possible to legalize commercial credit, which is issued by the contracting organization's client for execution of the standard amount of work already done on unfinished construction in accordance with the planned prime cost (but not at the full budget-estimated cost) at minimal interest; and for the forming of such a backlog work done above the norm—interest free if the backlog was created through the fault of the client, but at high interest rates for this same backlog if created through the fault of the contractor.

A construction organization's reimbursement for bank credit for uncompleted construction is unacceptable. The only structural unit that should and can monitor the progress of construction operations and their quality is the client. Where necessary the client can resort to the services of an independent consultant. Experience indicates that entrusting banks with the function of arbiter between client and builders, which is not characteristic for them, only draws the bankers away from the day-by-day analysis of the effectiveness of credit-resources utilization and the status of monetary turnover. The bank should require that investors introduce into operation in timely fashion facilities that are under construction, that is, by the prescribed deadlines (regardless of the sources of their financing), and, where necessary, they should impose economic penalties (higher interest rates, fines, and so on); the route that the investor takes to get collaborators to fulfill their commitments—that is his personal business. The procedure for settlements, the measures for responsibility and incentives, the reimbursement of losses, and other elements of mutual economic relations should be agreed to in contracts and be monitored by the parties concerned.

Contracting organizations must also be economically motivated to build up their own working capital through profit and other financial resources. These funds and

commercial credit will enable the contracting organizations to pay without interruption for materials, constructional structure, energy and machinery (where acquisition and use thereof are wise), and also to pay for the workers' labor at the scheduled rates, pay salaries, and so on. In so doing, all the material and labor expenditures should be kept within the total of their own working capital and commercial credit, and only in individual exceptional cases may bank credit be issued to form these funds, and at very high interest. All additional payments for quality and quantity must be deferred until turnover of the finished facility.

The second obstacle to converting to turnkey settlements is the fact that the builders must wait for a long time to get the actual profit from turning over finished facilities. Consequently, in the interim, during change of sources for financing uncompleted construction, let there be funds for economic incentives, and payments into the state budget will be postponed. Unevenness in the receipt of profit is the "privilege" not only of construction organizations but also of all enterprises that operate in the "lethargy to fever-pitch" cycle. As a rule the construction trusts erect simultaneously not one but several facilities, consequently work can be organized in such a way that their turnovers are so timed that they do not all fall on last day of the year but are distributed evenly by month and quarter. Temporary disparities between the requirements for funds for production and social development and the deductions from profit into the appropriate funds can be smoothed out by formation of the necessary financial reserves, and, in other justified situations, through bank credit.

The greatest danger for the budget is a temporary shift of payments out of the profit of contracting organizations, since the same shift will occur also in the budget financing of capital expenditures. Under the existing rules, the budget reimburses the client for the cost of intermediate operations at budget-estimated prices, which include profit, and then to exact from contracting organizations a portion of this profit, which it again releases into circulation for the financing of capital investment. Another portion of the profit, which remains at the disposal of contracting organizations, replenishes the material incentives fund by means of an already oversaturated mass of ready cash. In brief, the fictitious budget-estimated profit from the "turnover" of a foundation pit goes into the economic turnover as real money, and then, through the savings office window, loans, and so on, it is again taken into the budget. With the conversion to payment for finished facilities, the necessity for this, which is devoid of economic sense, is eliminated, and chasing back and forth for budgetary funds is done away with.

Restructuring of the whole system of economic relationships in the investment complex should have preceded expansion of the self-sufficiency of enterprises for capital construction, price-setting, the supplying of materials and equipment, and so on. We have put the cart before the horse—self-sufficiency was expanded, but

the old style remained as the economic mechanism for governing mutual relations. The more rapidly that this discrepancy is eliminated, the greater the chances of achieving a positive breakthrough in this area of economic activity, which is most important for the country's fate. One must not vacillate endlessly, like a pendulum, between decisions in favor of a market economy and decrees that regulate each step of economic organization.

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REGIONAL DEVELOPMENT

Estonian Minister on Enterprise Subordination, Energy Needs

904A0409A Tallinn SOVETSKAYA ESTONIYA
in Russian 22 May 90 p 2

[Interview with Yaak Tamm, minister of industry and power of the Estonian Republic, by Yaroslav Tolstikov: "Not To Tear Away, But To Integrate"; date, place, and occasion not given]

[Text] Yaak Tamm was born in Tallinn in 1950. He graduated from Tartu University in the specialty of industrial sociology. He worked as head of the laboratory of sociology at Tallinn State University, at the labor organization and management laboratory of the Estonian Agricultural Academy, in the group of regional production and economic research at the Tallinn Pedagogical Institute, as chief specialist in social problems at the Maynor Bureau, as deputy manager of the Orgstroy Trust, and as director of the Kodamu Firm. In April 1990 Yaak Tamm was confirmed as minister of industry and power of the Estonian Republic.

Yaroslav Tolstikov, our correspondent, converses with the ministry's director.

[Correspondent] What is within the ministry's jurisdiction? Which sectors and which enterprises? What is the role of the "sector's headquarters," as was customarily said not very long ago, under present conditions?

[Tamm] What is within its jurisdiction—it is quite simple to answer this: The entire industry and power located on the republic's territory, although to a varying degree of administrative subordination. As is well known, the present ministry was established on the basis of two committees—the ESSR State Committee for Industry and the State Committee for Fuel and Power.

[Correspondent] However, enterprises of Union subordination, for example, the Eletrotehnika Association, RET, and Volta, not to mention Dvigatel or Baltiyets, are called so, because they are subordinate to Union departments. What is the role of the Estonian Republic's Ministry of Industry here?

[Tamm] We assume that in time all the sectors enumerated above will be transferred to the republic's jurisdiction. However, the ministry coordinates the output of consumer goods at enterprises of Union subordination right now, having in mind primarily the interests of the republic's population. It stimulates the establishment of joint enterprises with foreign firms and expansion of the output of products for export at plants and associations of Union subordination. It also solves many material and technical supply problems. Although, as is well known, these enterprises are subordinate administratively to all-Union departments and one can say that the Estlesprom Association has dual subordination. At the same time, coordination of the development of the entire industry and power located on the republic's territory is up to our ministry.

[Correspondent] In February of this year in accordance with the decision of four governments—the USSR, Lithuania, Latvia, and Estonia—some enterprises of Union subordination located on the territory of the Baltic republics were placed under their authority.

[Tamm] Quite true. The largest of them can be mentioned. They are Ilmarine, Eesti Kaabel, Vyyt, the Talleks Association, Vyrupribor, and Estonfosforit. Active work on transferring these enterprises to the republic's Ministry of Industry is now being done. Contracts are being concluded for a specific period. According to them the mentioned enterprises will fulfill the assignments of their former Union departments, receiving raw materials and supplies from them and, at the same time, increasing the output of products necessary for the republic. This work is very complex and will take considerable time. There are difficulties with the extension of credit and currency deductions. Nevertheless, we find mutual understanding with Union departments. Controversial problems are now being solved.

However, I must stipulate right away that, when it is a question of enterprises of Union subordination, the republic's government and the ministry's management do not at all set for themselves the task of tearing them away from the Union market and abruptly changing their structure—in no way. Our task is to integrate these enterprises into the republic industry and the Baltic market and to place the commodity exchange with the East on a mutually advantageous basis, at the same time, developing economic relations with the West. In our opinion, enterprises of Union subordination, without damage to their present consumers and with benefit for themselves, will be able to successfully cope with both tasks.

Eesti Kaabel, Loksa Ship Repair, Vyyt, Tartu Instrument Making and Engineering-Foundry, Ilmarine, and Volta plants, Vyrupribor, RET, and Slantsekhim associations, and the Kiviyl Plant are establishing contacts with Swedish firms, intending to organize mutual deliveries of products based on cooperation. Siberia's commercial center headed by the mayor of Novosibirsk has turned to us with the proposal to organize economic cooperation.

We also intend to establish and develop long-term relations with other cities and regions in the USSR. Thus, while developing trade with the West, in no way do we intend to curtail economic relations with the East. Moreover, we intend to expand these relations on a mutually advantageous basis.

[Correspondent] However, the question of subordination can also be raised differently: Is it really so important to whom a specific enterprise is subordinate? Let us ask ourselves: To whom, for example, is the Mitsubishi Concern, or General Motors, subordinate? They follow economic laws. They pay taxes. And that's all. For some reason questions of subordination do not arise there. Why in our country has it acquired such fundamental importance and, perhaps, even a painful nuance?

[Tamm] In fact, is it really important to whom a specific production facility is subordinate and, in general, is it necessary to subordinate it to someone? However, such a formulation of the question will be legitimate only under conditions of developed market relations. And we are striving for this. However, the market in the USSR and, in particular, in the Baltic region is still only in a rudimentary state. Many enterprises of Union departments, fulfilling Moscow's directives, do not work for the market at all. Therefore, problems of subordination are of quite big significance for us today. The old should not be destroyed before the new is created. It seems, however, that in time the acuteness of the problem will be eliminated.

[Correspondent] We have not yet touched on problems of power engineering. After all, it is quite strongly developed in our country.

[Tamm] A program for the development of the republic's power engineering is now being created. This is extensive work and it should be completed by July of this year. The problem is that, on the one hand, it is necessary to provide the republic with power and, at the same time, to observe the purity of the environment and ecological requirements. Furthermore, the use of shale for the production of electric power is not the best alternative.

[Correspondent] Today, however, it seems that the republic is provided with electric power and, moreover, sells it to other USSR regions.

[Tamm] Yes, this is true. But it sells it at a loss, because the price per kwhr does not cover the expenditures on its production. This is another problem, which complicates matters. The republic's Academy of Sciences and other organizations are now engaged in all these matters. We should see the future of power engineering. Its particular feature in Estonia lies in the fact that local fuel—shale—is now used for power generation in our country. The task is to ensure the interfacing of the shale extraction industry with the needs of power engineering. Nevertheless, shale is primarily raw material for the chemical industry. Therefore, alternative sources of energy—wind

and heat pumps and others—evidently, will be developed in the future. A reduction in the power intensive-ness of production is the main task. This is our ministry's direct task, which we will accomplish with the help of the enterprises themselves. With regard to subordination, in our opinion, the following situation is indisputable here: All intrarepublic networks should be under the authority of our ministry. It is more apparent to us in this locality what and how to develop here and how to act.

[Correspondent] The electronic industry is represented by RET associations and, in particular, by the Plant imeni Kh. Pegelman.

[Tamm] We have also analyzed the operation of these enterprises. Their potential is significant, but they do not produce a single product for export. This is completely abnormal. After all, it is possible to unify the efforts of these enterprises, as well as those of the design bureau of the Institute of Cybernetics, and to jointly solve export problems.

We have estimated that it is necessary to invest about 35 million dollars in the development of the republic's electronic industry in order to retool it and then to enter the Western market, making products competitive. There are also possibilities of establishing joint enterprises. We are ready to provide our assistance in all this.

[Correspondent] Perhaps the most acute question. What if... What if the Soviet Union also applies economic sanctions to the Estonian Republic? What resources are at our disposal? Is such a "black scenario" studied at all?

[Tamm] First, in our opinion, the economic blockade against Estonia, as against Latvia, is not very probable. Losses are too big, primarily for the Soviet Union itself. Lithuania's example has confirmed this graphically. The damage to the country's economy as a result of the cutoff of the supply of petroleum and gas to this republic runs into billions of rubles. The entire USSR national economy is so interconnected and so monopolized that discontinuation of the output of any part, even if it is worth one kopeck, leads to a reduction or stoppage of production at other enterprises and in other regions, which produce products valued at millions of rubles. If, let us assume, economic sanctions also apply to the Estonian Republic, first of all, we will be forced to shut down enterprises of Union subordination as the most power intensive ones. First of all, these collectives and the economic interests of the country as a whole will suffer. We think that the central authorities in Moscow have already realized this.

All the enterprises located on the republic's territory operate today. Not a single one is idle. There have been delays in deliveries of raw materials, but they do not have an underlying political cause. The point is that, as is well known, the USSR State Bank has centralized throughout the country the procedure of financial settlements between suppliers and consumers of products in republics. As in any new business, shortcomings have also been detected here. Bank institutions in Moscow do

not manage to make out invoices. Now, however, the situation is changing for the better.

Nevertheless, we are also examining alternatives, which are most unfavorable for us, in the course of events. The situation with fuel and power resources in our country, as compared with Lithuania, is much better. We ourselves can also produce gasoline from shale, which, incidentally, was done before 1950, although it will be more expensive. The situation with exports is worse.

[Correspondent] According to the data available to the editorial department—and SOVETSKAYA ESTONIYA wrote about this more than once—Estonia's exports outside the USSR make up approximately one-third of its imports.

[Tamm] This should be discussed especially. Yes, our republic centrally received comparatively more imported equipment—for example, for light industry—than others. However, this was not a free gift. The calculation was as follows: Estonia has quite good traditions in light industry. The production standard and labor organization are comparatively high here. In other words, we have capabilities to best utilize modern imported machinery for the output of high-quality products. As a rule, these calculations have been justified. After all, the cow that is milked later is fed now. The import of equipment from centralized sources is now being reduced and the republic is changing over to currency cost-recovery. In this connection the following question arises: To whom is it more advisable to sell, first of all, our light industry products—to the Soviet Union, or to the West. Obviously, they should be sold to the USSR in the exact quantity as that of the raw materials we receive from it and the rest, for our intrarepublic market and export.

[Correspondent] Will we be able to sell something in the West?

[Tamm] Many items of our light industry will have a good sales market in the West. This is confirmed by the orders that the Estar Concern, its Krengolmskaya Manufaktura Combine, the Marat Knitwear Association, and other enterprises already have. Incidentally, this is also profitable for the Soviet Union as a whole, if we take our geographical situation into consideration. We transport cotton across the entire country—from Central Asia to the Baltic region and from there again to the East. Transport costs are very high. We could also export much more furniture than now.

[Correspondent] How do we see the future of the Estonian Republic's economy? What needs to be done for its fundamental improvement?

[Tamm] To be sure, the market mechanism should become the basic mechanism in the economy. For this we need laws on taxes, prices, and property—first of all, them. For now, however, such laws have not yet been adopted in the republic. But without them nothing can develop in the economy. Such is the tendency. It is not

advisable to develop power-intensive production facilities, especially as in our country raw materials are imported. It is not advisable to establish and develop big production facilities with a large number of workers. For example, in Finland the average number of workers at enterprises is 14, although there are also very large ones. Evidently, we will also follow the path of establishing small enterprises, which are more flexible and maneuverable. The process of privatization of enterprises—establishment of joint-stock companies—will also begin. It has a big future. Repeating myself, I will say that even such big plants as Dvigatel will find a place in our common economy. It is not important what language a person speaks—Russian, Estonian, Finnish, or any other. The language of the economy has always been and remains common, because our economic interests are the same.

[Correspondent] Thank you for the talk. My questions have been exhausted.

[Tamm] In conclusion, I would like to say that political strikes, which have now begun to be discussed again, will not solve political problems—these problems should be solved by other methods. At the same time, in such a case vast, at times irreparable, economic damage will be done to the republic's economy and the country as a whole. This, in turn, will aggravate interethnic relations and worsen the general political situation in the republic and in the country. One would greatly wish that all our labor collectives could understand this.

Industrial, Living Conditions in Donbass Detailed

904A0497A Moscow VESTNIK STATISTIKI in Russian No 2, Feb 90 pp 36-42

[Article by V. Kotelnikov, deputy director of the Donetsk Oblast Statistical Administration: "Experience in the Analysis of the Social Development of the Oblast"]

[Text] There has recently been an extraordinary increase in the importance of analytical information on the complex processes taking place in the country and in individual regions of it. Such information helps to make an objective assessment of the situation in the economy and social sphere and to determine causes and ways to resolve problems.

Thus, the analysis performed by the oblast statistical administration does much to clarify the sources and possibilities for overcoming the recent dramatic situation that developed in Donbass.

Donetsk Oblast accounts for one-seventh of the republic industrial production and in its volume the region occupies a leading position in the country. At the same time, the production potential continues to increase intensively. In the last 20 years, about 32 billion rubles have been applied to the development of the production base, which is four times more than for the construction of facilities in the social sphere. The value of fixed capital

in industry increased by a factor of three in this period, there being four times as much fixed capital per unit of the territory than the average for the republic. The industrial base of the oblast is made up of branches that actively pollute the environment: electric power, ferrous metallurgy, coal mining, the chemical industry, the manufacture of building materials and others. Industrial enterprises discharge about three million tons of harmful substances every year, which accounts for approximately one-fourth of all emissions in the republic. The density of emissions per square kilometer of territory is five times higher than the average for the republic and 37 times greater than the average for the USSR.

The state of the water basin is no better. The industrial and sewage outlets pollute not only the rivers but in the final analysis also the Sea of Azov, depriving the inhabitants of the oblast of a most important regional recreational zone.

The existing ecological situation in combination with the high population density (201 people per square kilometer) has a detrimental effect on the health of the inhabitants of the oblast. We have the highest annual losses of working time because of illness in the republic—937 man-days per 100 workers (797 for the Ukrainian SSR). Mortality from malignant new growth increased by one-fourth since 1975, including by a factor of 1.8 from cancer of the respiratory organs. In this same period, mortality from diseases of the circulatory organs increased by 46 percent and by 38 percent from diseases of the blood and blood-producing organs. Children suffer in particular thereby. Among them, in particular, the morbidity of blood and blood-producing organs was three times higher than for the population of the oblast as a whole.

Ecological problems are the reverse side of scientific-technical progress. But the question arises of whether it is correct to consider what creates a threat to the health and lives of people as progress?

It must be noted that no perceptible improvement has yet been noted in working conditions either. The share of workers employed in manual labor in the oblast economy has remained at about 40 percent for more than 10 years. Almost 67 percent of industrial workers are working under harmful and difficult conditions and among women this index reaches 45 percent.

Under such unfavorable ecological and production conditions, it would be natural to grant the inhabitants of the oblast some forms of competition in the area of consumption: food, commodity supply and services. In practice, however, the acuteness of the problems here is in many cases even greater than in other regions.

Thus, being the undisputed leader in the republic in terms of the load of harmful and difficult production, the oblast is by no means a leader in the consumption of food products. It occupies 7th place in the republic in per-capita meat consumption, 9th in milk, 5th in eggs, 22nd in potatoes, 10th in vegetables and cucurbit crops

and 25th in bread products. In terms of the data of a budget survey, the caloric value of the daily ration is less than the standard for the republic. The consumption of meat remains 11 percent behind the norm, milk 3 percent, potatoes 22 percent and vegetables and cucurbit crops 20 percent.

In principle, the natural conditions of the oblast make it possible to alleviate the food problem substantially but that is in the event of a change in production relations in agriculture. This process is gaining strength with the development of lease, individual and family contracts.

At the same time, there must be a fundamental improvement of the social infrastructure of the countryside. Up to the present time, 56 percent of the housing stock has no water supply, 65 percent no sewage system, 70 percent no central heat, 68 percent no bathtub or shower and 49 percent no gas. In terms of the level of rural gasification, the oblast occupies one of the last places in the republic.

To this it should be added that, as a rule, wages in rural areas are lower than in industry and construction. It is even more difficult to turn wages into goods in the countryside than in the cities. In 1988, the commodity turnover was 1,294 rubles per urban dweller and 779 rubles per rural inhabitant and the level of consumption of services by villagers was 25 percent lower than in the cities. Accordingly, postponed demand is more significant in rural areas (the average amount of deposits to savings bank institutions here is 1,668 rubles compared with 1,434 rubles in the cities).

The backwardness in the development of the social sphere is causing a continuous migration of the rural population to the cities. Since 1960, the number of residents of the countryside declined by 99,000 (by one-sixth). The share of persons here beyond the age when they are capable of working increased from 21 percent in 1970 to 27 percent in 1989. The death rate increased by a factor of 2.2 in comparison with 1960.

If this trend is not changed, there will be no one left to reorganize production relations and to solve the food problem.

The urban population has a growing inclination toward private garden plots. Because of the limited land resources, however, 22,000 applications for plots have not yet been satisfied, this requiring about 1,300 hectares of land. The problem is not so unsolvable if one considers that the area of damaged lands amounts to 22,800 hectares, whereby one-fifth of that area has already been developed and after recultivation can be utilized for agricultural production.

The mass of money in the population is growing more rapidly than the supply of goods and services: in 1988 alone, the retail commodity turnover increased by 470 million rubles, the sale of services by 75 million rubles and the monetary income of the population by 703

million rubles. It is more and more difficult to turn earned rubles into real consumer values.

The basic reason for this situation is the unbalanced development of the country's economy as a whole and in the oblast in particular, which for many years was not oriented toward the needs of consumers. The share of fixed capital of light and food industry in its total value in the oblast in 1988 was 1.6 and 2.4 percent, respectively, whereas the share of the fuel and raw materials branches was 72 percent. Accordingly, consumer goods account for only 16 percent of industrial production in the oblast (25 percent in the country). The existing structure essentially helps in the development of production for the sake of production and contributes to the entrance in the market of a large volume of monetary assets earned by the workers of the branches of heavy industry and not covered with commodities.

The inefficiency of capital construction leads to analogous results. At the present time, 3,409 facilities are being erected simultaneously. With this kind of dispersion, the average time of construction is almost 10 years. The volume of incomplete construction amounts to 2.4 billion rubles. The invested assets are essentially frozen and yield nothing for many years. The systematic non-fulfillment of the program for the introduction of facilities does not prevent construction organizations from receiving profit and wages. In this way, the pressure on the consumer market becomes even greater.

It is also necessary to say something about the excessive physical assets at the enterprises of all branches. In industry alone in 1988, their total exceeded the norm by 274 million rubles. Wages were paid out for the manufacture of these physical assets but, being in the warehouses, they do not provide any commodities.

The reduction of the sale of alcoholic beverages had a definite influence on the exacerbation of the problem of shortages. The population saved about 540 million rubles in three years as a result of this campaign. But since the process of the normalization of the structure of the commodity turnover was not supported by the appropriate increase in the production of high-quality goods and services, this money remained incompletely covered with goods.

The indicated factors and others dictated a significant increase in unsatisfied demand. As a consequence, deposits in saving banks increased by one-third in the current five-year plan. They have now reached 7.26 billion rubles. And whereas in 1970 there were 65 kopecks of commodity stocks for every ruble of deposits, there are now only 15 kopecks per ruble. This makes the situation in the market unpredictable.

New commodities are joining those traditionally in short supply. The fact that the plans for the production of different commodities are being fulfilled indicates that the planning targets are doing a poor job of considering the real needs and existing demand. The oblast issues 9.5 kg of synthetic detergents per inhabitant (a little more

than 5 kg in the republic and 4.5 kg in the country), whereas it is 15 kg in the United States, 23 in Great Britain and 20 in the FRG.

The overfulfillment of plans and the increase in production are frequently accomplished through the issue of more expensive output without a corresponding improvement in quality and through structural changes to the detriment of inexpensive goods. In 1988, for example, the output of leather footwear by the Donetsk Association increased by only 1 percent in terms of pairs but by 22 percent in rubles. The average price of 1 kg of bread and baked goods was 27 kopecks in 1985 but 33 kopecks in 1988. Taking into account the change in the assortment, the price increased by 16 percent in comparison with the beginning of the five-year plan.

The overall shortfall of the plan for commodity turnover is increasing continuously and amounted to 700 million rubles last year. Under the existing conditions, there was a drastic worsening of the imbalance of monetary income and expenditures of the population. The gap between them increased by 19.2 percent in 1988 alone and reached 340 million rubles. The inhabitants of the oblast were forced to satisfy the demand for this amount either beyond its borders or in the scope of the "shadow economy," the scale of which is constantly growing under the existing conditions.

According to the data of the budget survey, which covered 1,325 families in the oblast, about seven percent of all expenditures of surveyed families is for the purchase of industrial goods from private workers. The highest share of purchases from private workers is 17 percent for building materials and eight percent for fabrics, clothing and footwear. One out of five rubles for food also is paid to individual citizens.

Under the conditions of the worsening shortage, the number of dangerous mercenary crimes is growing. Thus, the number of registered cases of criminally punishable speculation increased by 37 percent in three years and cases of bribery increased by 20 percent.

The lack of balance in the consumer market has a pernicious effect on the monetary turnover. The cash plan for receipts in 1987-1988 was 98.3 percent fulfilled, the shortfall in receipts being 194 million rubles. Accordingly, there was an above-plan emission of money, which amounted to almost 229 million rubles, or 5.7 percent of the expenditure under the oblast cash plan.

A fuller utilization of the oblast's industrial potential, especially of enterprises in heavy industry, ought to help diminish the tension in the consumer market.

Here they are still issuing primarily hardware, dishes, metal gates, ironing boards and the like. The enterprises are practically making no attempt to master the production of electric appliances, mechanisms for the cultivation of private and cottage plots and other technically complex output. One out of three oblast enterprises of group "A" failed to master even a single new kind of

consumer goods in 1987-1988. Almost 30 percent of the enterprises have no specialized shops or sections, that is, the goods are manufactured in adapted areas utilizing primitive and obsolete equipment that ensures neither the necessary quantity nor quality of produced output. As a result, the production of commodities at almost half of the enterprises in group "A" amounts to less than 10 kopecks per ruble of the wage fund. We also have a right to expect a substantial increase in goods from the beginning conversion of defense production.

At the same time, it should be emphasized that under the existing domestic specialization of the oblast it is impossible to overcome the shortages completely merely by mobilizing internal reserves. The problem can be solved radically only under the conditions of the real independence of enterprises and regions as a whole. In this case, in delivering its output to the national and international market, the oblast has a right to claim an adequate supply of consumer goods from other regions of the country as well as from abroad.

The oblast's trade organizations are intensively developing direct operations for the exchange of goods. Thus, almost 17 percent of the semiannual commodity turnover of the Raduga Department Store in Donetsk was comprised of goods received under direct ties. With the current level of production of consumer goods and state of the domestic market, it is not easy to find goods that one could make available to foreign partners without hurting one's own customers. This deprives direct ties of trade organizations of dependable prospects.

The development of foreign economic activities of industrial enterprises and associations with the simultaneous expansion of the rights of immediate producers in the expenditure of earned foreign exchange opens up great possibilities. The utilization of part of it for the social needs of collectives, including for the purchase of consumer goods, would, on the one hand, stimulate an increase in exports and, on the other hand, would reduce the tension in the consumer market.

The oblast occupies 21st place in per-capita consumption of domestic services. Despite the continuous increase in the realization of paid services, the population is essentially not perceiving any improvement in the work of the service sphere. In the course of a random survey, moreover, 69 percent of the families polled noted that this work has worsened in the current five-year plan.

The service sphere is not yet performing its basic functions as it should: the saving of free time of working people and its useful application. The relative share of services for the organization of free time in the total volume of services is quite modest: cultural services make up 4.6 percent of the total, physical culture and sports 0.3 percent and touristic and excursion services 3.7 percent. Passive forms of recreation dominate in the structure of the population's free time. According to the results of a random survey, a worker spends an average of 1 hour 50 minutes a day in front of the television. He

spends 39 minutes reading newspapers, journals and artistic literature, 11 minutes on public entertainment, 18 minutes strolling and about 1 minute in sports. The average inhabitant of the oblast spends less than 8 rubles a year on the organization of free time.

Whereas the sports palaces dedicate only 15 percent of their work time to physical culture and the improvement of health, thousands of working people are deprived of the possibility of participating in sports even for pay. Services in physical culture and sports amount to 59 kopecks per inhabitant of the oblast.

As a whole, the backwardness of the services sphere is manifested in the fact that over a long period of time the share of expenditures for services does not exceed nine percent of the total sum of expenditures by the population of the oblast. To compare, this share is 20 percent in Czechoslovakia, 22 percent in Hungary and more than 50 percent in the United States.

The cooperative movement has a great potential for increasing the volumes of goods and services. In the period since 1 July 1988, the number of active cooperatives increased by a factor of 5.9 and reached 2,697. The number of people employed there increased by a factor of almost 11.4 and amounted to 57,801.

In the first half of 1989, cooperatives issued goods and services amounting to 54 rubles per inhabitant of the oblast, whereas this indicator was six rubles in the corresponding period of the previous year.

Despite the substantial quantitative growth, the role of cooperatives in satisfying consumer demand is still insignificant. In the first half of 1989, their share in the oblast production of consumer goods was only 1.8 percent and 0.6 percent in the commodity turnover of public catering. It was appreciable only in the realization of domestic services.

The situation that has developed with respect to cooperatives is ambiguous. On the one hand, by virtue of their flexibility and economic efficiency, they do much to satisfy the demand for those goods and services that state enterprises and organizations do not produce or produce too little of. On the other hand, most working people clearly have an increasingly negative attitude toward cooperatives. In the course of a random survey, 69 percent of those questioned had a negative attitude toward the development of the cooperative movement. As a rule, the main reasons were unjustifiably high prices and incomes of cooperators.

At the same time, in our view, the reasons for the existing situation are not always considered. At the current level of development of cooperatives, state enterprises essentially remain the primary producers of goods and services in the market and, just as before, are not interested in a fundamental improvement of their work. The lack of competition of high-quality state services

allows the cooperatives to set their prices much higher than those of the state in accordance with the existing demand.

Cooperative prices could come down with an increase in competition between the cooperatives themselves. For this, however, there must be many more cooperatives than at the present time. The increase in their activities is hampered by organizational difficulties in their establishment, the lack of the necessary premises and a shortage of raw materials and supplies. The discrepancy between the desire and possibilities of cooperators to develop their own work is indicated by the fact that at the present time only 60 percent of the 3,981 registered cooperatives have been able to begin work.

At the present time, the difficulties arising in the organization of cooperatives can be overcome only by people who are either extraordinarily enterprising or unprincipled. This casts a shadow on the cooperative movement as a whole and discourages honest and conscientious people from participating in it.

The provision of the population with housing remains an urgent problem. An analysis shows that in the current five-year plan, even fulfilling the plans for housing construction, we are practically coming no closer to the final objective of providing each family with a separate apartment or house. The tendency toward a decline in the rate of construction of housing that began to show up in 1988 has not been overcome: in 1989, 5.2 percent less of it was introduced through state capital investments than in 1988.

It is not surprising that instead of the reduction of the waiting time to obtain housing as foreseen by the program, it is still increasing. As of 1 January 1989, there were almost 269,000 families waiting, which is 9,000 more than a year ago and 25,000 more than the reference points in the program.

Today the resolution of the housing problem is being curbed primarily by the limited nature of construction capacities and materials. It is aggravated by the dispersion of the forces and means of the construction complex. 35 construction projects and 231 construction units were temporarily stopped and preserved. At the same time, 1,368 new facilities were included in the plan. The resources allocated for their construction would be enough to construct 58,000 apartments (only 32,000 of them were built in 1989).

Overall for the oblast in 1989, 12.7 percent of all capital investments were put into housing construction. This is somewhat below the level of the 11th Five-Year Plan (13 percent) but is significantly behind the indicator of the distant Sixth Five-Year Plan (24.7 percent).

The provision with children's preschool institutions is lagging behind the need. There are now 297,000 children attending them, where there are 282,000 places. That is 106 children per 100 places. In the last three years, the waiting line declined by 10 percent and amounted to

27,000 people. But 163,000 children between one and six years of age do not yet attend preschool institutions and potentially may join the ranks of those waiting.

Problems in medical services are vitally important for the population. As was already noted, the oblast, finding itself in extremely unfavorable ecological and production conditions for the health of the population, does not have a perceptible advantage in the level of the material-technical base of public health. There were 41.1 physicians per 10,000 inhabitants (43.1 in the Ukrainian SSR), 121.2 mid-level medical personnel (115.5 in the Ukrainian SSR) and 136.2 hospital beds (133.7).

The provision of medical assistance is even lagging behind the average standard for the republic. The lag is three percent for hospital beds, 20 percent for mid-level medical personnel and 41 percent for out-patient polyclinics. There are three workers with a mid-level medical education per physician, whereas the standard is 3.5. One must thereby keep in mind that the standards worked out for the republic do not take into account the specific nature of our region, in particular the necessity of clinical treatment for miners and other categories of people working under harmful and difficult conditions.

The state of health of women and children is causing particular concern. In 1988, 19 percent of births had complications (16 percent in 1985). In three years, the morbidity of parturient women with anemia increased by a factor of 1.7, with chronic pyelonephritis by a factor of 1.5 and with coronary-vascular diseases by a factor of 1.3. The share of children getting sick and being born ill increased from 9.7 percent in 1980 to 11.3 percent in 1988.

Along with other reasons, also having an effect are the lack of sanitation and the backwardness of the material-technical base of therapeutic institutions, especially maternity homes. In view of the threat of the spread of AIDS, this is becoming particularly dangerous.

A fundamental improvement of the situation in public health and the social sphere as a whole presupposes above all the renunciation of the residual principle for its development. So far the share of production construction in total capital investments is not declining: 78 percent in 1986, 76 percent in 1988 and 81 percent in 1989. This kind of "reorientation of investments" cannot help to bring about a significant improvement of the situation.

After a certain decline in crime to some extent having to do with the action of the Ukase on the Fight Against Drunkenness and Alcoholism, a significant increase is again being noted. In 1988, the number of recorded crimes increased by 5.2 percent in comparison with 1986. Premeditated murders and attempted murders increased by 20 percent, severe bodily injuries by 40 percent and theft of personal property by 37 percent, including 30 percent in apartments. The number of large and especially large embezzlements of state and public property increased by one-third.

The working people of the oblast are dissatisfied with the slow pace of perestroyka in production relations and the social sphere. The dissatisfaction reaches extreme forms, leading to strikes. In June and July of 1989, almost 490,000 man-days of working time were lost because of strikes by miners, 1.9 million tons of coal were not mined and the cost of underproduced industrial output was 80.2 million rubles. Such losses certainly complicate the resolution of complex social problems even more.

It is urgently necessary to reexamine decisions and programs previously adopted in social questions from the point of view of their compatibility, validity and priority. At the same time, the programs must not only

ensure the resolution of the problems visible today but also determine the long-term prospects for the development of the region.

It is expedient to publicize with the necessary explanations the packages of social programs reviewed with the broad participation of the public so that the labor collectives and each working person will see which specific measures will be implemented through what means and which ones cannot be carried out and why.

In my view, even the strongest social programs can be carried out effectively only under the conditions of the true independence of enterprises, regional cost accounting and real authority of local soviets.

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AGRO-ECONOMICS, POLICY, ORGANIZATION

Military Vehicle Support to Harvest Efforts

904B0259A Moscow SELSKAYA ZHIZN in Russian
19 Jul 90 p 2

[Interview with Col Gen V.F. Popov, chief of the Main Motor Vehicle Directorate of the USSR Ministry of Defense, by M. Zakharchuk: "From the Fields to the Granaries"]

[Text] In accordance with a decision by the USSR Council of Ministers, 60 motor transport battalions are participating in this year's harvest campaign. The harvest will be taken out by 30,000 military trucks. The TASS correspondent discusses the problems having to do with this economic operation with Col Gen V.F. Popov, chief of the Main Motor Vehicle Directorate of the USSR Ministry of Defense.

[Zakharchuk] Vasiliy Fedorovich, in 1987, the Ministry of Defense sent 50 motor transport battalions to help agriculture. After that, the respective figures by years were: 60, 74 and again 60 battalions. On the average, as they say, it is a stable indicator. But this year, as they told me, the situation with respect to motor transport battalions differs fundamentally from all previous years. How would you characterize it?

[Popov] As a very complex situation that we practically did not encounter previously. And here is why. In past years, the motor transport battalions were, as a rule, provided with trucks so that after the harvest these motor vehicles could be sold to the national economy. The situation is now such that all 30,000 motor vehicles must be returned to operations at the conclusion of the harvest. The reason is that the number of motor vehicles in the army has declined.

[Zakharchuk] Are you counting on worse alternatives?

[Popov] The circumstances are forcing this. The fact is that only the battalions of the Strategic Missile Forces are fully manned with their own regular drivers. In the subdivisions of the remaining service branches, there is one military driver for every four trucks. For the rest of the motor vehicles, they will call up military reservists who are not employed directly in agriculture.

[Zakharchuk] Is it this problem of full manning that concerns you most?

[Popov] Yes, because, to put it mildly, their attitude toward it locally is not very responsible. I will present just a few examples. In Ryazan Oblast, only 19 of 120 drivers called up met the requirements on them. In Volgograd Oblast, they were supposed to call up 119 drivers. They called 50 and admitted 19 to the work. In that same Volgograd Oblast, they thought up what I consider to be a unique "experiment": they call up

drivers for the harvest who lost their licenses for serious violations of traffic regulations (driving under the influence, etc.).

[Zakharchuk] By the way, Vasiliy Fedorovich, you just returned from a trip to Volgograd Oblast, where you observed the deployment of the motor transport battalions and their work. What impressions did you bring back from there?

[Popov] The most satisfactory thing is that I became personally convinced that the overwhelming majority of soldiers eagerly began this work of importance to the state. The drivers and service personnel were provided with everything that is needed for normal labor.

[Zakharchuk] What specifically do you mean?

[Popov] The soldiers have an almost 2-month supply of food products taken directly from military storehouses. The vehicles are supplied with enough spare parts for two months. Those who arrived at the local sites set up their settlements in record time, put in electric power, stored up water and developed systems for the repair of vehicles. I will not be so bold as to say that this was the situation in all battalions but I can vouch for most of them.

[Zakharchuk] This is not the first time that I am writing about motor transport battalions in the grain harvest and each time I encounter cases of an attitude of local authorities toward the soldiers that is less than ideal....

[Popov] This is a very complicated problem, especially under today's complex conditions, when there has been an intensification of frequently unfair attacks against the armed forces by some of the mass media. Without going into details, I must note the following. Three years ago, there were an average of 600 transferred tons of freight per vehicle of ours working in the grain harvest. A year later, this figure was 400 tons. Last year we conveyed only 350 tons, although we had every possibility of increasing this basic indicator by a factor of 2 to 2.5. Our idle time over the season amounted to 300,000 machine-days. The reasons for this are banal—lack of work for the drivers.

In conclusion, I want to remind the representatives of local authorities and economists that the participation of members of the military in the grain harvest is by no means an inexpensive economic undertaking. The cost of one motor transport battalion during the harvest season is 1,200,000 rubles. The state pays approximately half of this sum. So we are careful with the people's kopeck. Our duty and our conscience require this.

AGROTECHNOLOGY

Improved Per Capita Grain Production Requires Imports, More Corn*904B0211A Sverdlovsk URALSKIYE NIVY in Russian No 4, Apr 90 pp 45-47*

[Article by V. Loskutov, agronomist: "It's Possible To Spend All Our Money On Food"]

[Text] The CPSU Central Committee Politburo approved a decision regarding the elaboration of a public grain program for the 1991-1995 period. The government, along with party, soviet, and economic organs and scientific institutions, is completing preparation of this document. In this regard the article by Agronomist Vasily Ivanovich Loskutov is of special interest. For a long time he worked on a collective farm. He was the chief agronomist of a machine-tractor station and worked in a scientific-research institute. He was sector chief in the agriculture and food industry department of the CPSU Central Committee.

Our country purchases large quantities of grain abroad and these purchases grow each year. Here is the import picture: in 1986 we acquired 26.7 million tons of grain (except barley), in 1987 - 30.4, in 1988 - 35.0, in 1989 - 36 million tons.

Table 1: Grain Production in the USSR (data from the USSR State Committee for Statistics)

Years	1966-70	1971-75	1976-80	1981-85	1986-89
Average Per Year, Millions of Tons	167.6	181.6	205.0	180.3	206.6 (Author's calculation)

I would like to give some thought to these figures. What do they mean? Currently in official announcements and in speeches by many supervisory workers the accent is on the fact that during the twelfth five year plan the average yearly production of grain increased by 26 million tons in comparison to the previous five year plan. Corresponding percentages of increase are cited.

I would like to analyze this data much more thoroughly in order to clarify what is really happening with grain production and answer the question of why we purchase such large quantities abroad. Simultaneously, I would like to submit concrete proposals for increasing grain production in our country and for its effective utilization.

For this it is necessary to make a comparative analysis in several areas. And so, we ask ourselves what results were achieved during the seven years since the May (1982) CPSU Central Committee Plenum which ratified the Food Program? During the 1976-1982 period average yearly grain production was 195.7 million tons and for the 1983-1989 period it was 197.7 million tons. Therefore, increase in grain production comprised only one percent. I want to especially emphasize that for purposes of comparison and correct evaluation of how economic measures function, we must take into consideration precisely these time periods. Any other comparison will be inexact or dependent on particular events.

Hard currency reserves disappear overseas instead of remaining in our country. Therefore, it was not by chance that the questions of grain production and its efficient utilization were raised for discussion at a CFSU Central Committee Politburo session in November 1989. The government is working on the all-union "Grain" program for the 1991-1995 period. I would like to share a few thoughts and proposals on this issue as well as my opinion about the actual grain production situation in our country.

Information appears in the press to the effect that we produce more grain than the countries of the EEC. All we need to do, they say, is to reduce losses and the problem will be resolved. The fact that we need to reduce losses at every stage in the production process and in utilization is an axiom. But to assert that 240...250 million tons are enough for us is a serious error. If we orient ourselves toward those figures, a number of tasks regarding the development of science, agricultural machine building and construction will not be solved. Back during the fourth congress of collective farm workers, M.S. Gorbachev stressed that during the next thirteenth five year plan, we needed to raise production to 260...280 million tons of grain per year. However, in my opinion, even that amount is too small.

So, let's analyze the results of grain production for the last four years of the five year plan (table 1).

But that it is still not the most important figure. The most objective criterion is the figure for per capita grain production. From published data on the USSR population it is not difficult to calculate what per capita production was for these years. Thus, for the 1976-1982 period average annual per capita production was 746 kg and for the 1983-1989 period - 709 kg, that is to say, there was a reduction of 37 kg or 5.0 percent. In other words, we can put it this way: the population is growing but per capita grain production is falling.

In short, no matter how bitter it is to admit, the truth is that the economic incentives worked out by the May (1982) CPSU Central Committee Plenum regarding production of the most important agricultural product - grain - have not had a positive effect.

Now let's compare per capita grain production (table 2).

Table 2: USSR Per Capita Grain Production

Years	1972-1975	1976-1980	1981-1985	1986-1989
Average per year, Kg	730	788	665	731

This data demonstrates that per capita grain production in the twelfth five year plan is on the level of the ninth five year plan.

In order not to commit a mistake in identifying tendencies, let's analyze grain production both in absolute figures and in per capita figures for the past 19 years. I

think that such a comparison is the most objective and methodologically correct one. (table 3).

Table 3: USSR Grain Production 1971-1989

Category	1971-80	1981-89	1981-1989 as a percentage compared to 1971-80
Average Grain Production Per Year (millions of tons)	193.3	192.0	99.3
Average Population Per Year (millions)	254.4	276.4	108.4
Per Capita Grain Production	760	695	91.4

This data shows that the situation with grain production in our country is not healthy. The size of our population is growing but per capita grain production is falling. Urgent measures are needed for the next two to three years and large-scale measures up to the year 2000.

Let's compare grain production in the European countries to that in the USSR. In the newspaper PRAVDA of 7 November 1989 the corresponding figures are cited. It is emphasized that we use almost two times more grain than the EEC countries. Despite this, they produce more animal products than our country. This question deserves very serious study. The effectiveness of livestock production depends on a large number of factors. The fact is clear, though, that the European countries are reducing grain expenditures while simultaneously increasing the use of high-protein feed. Data from the All-Union NII [Scientific-Research Institute] of Information and Agricultural Technical-Economic Research demonstrates that the proportion of high-protein feed in feed rations is constantly increasing in the EEC countries. The ratio of grain to high-protein feed in feed rations has reached 2.6:1.

The state grain production goals are not being fulfilled in the twelfth five year plan. Along with this it is impossible not to take into account the fact that our population is increasing each year by 2.4 million people.

If we consider the future and suppose that in the coming twenty years the population will increase at the same pace, then in the year 2009 the population will have increased by 47 million people and will be approximately 334 million. If planned social programs are implemented the population will undoubtedly be larger. And that means that grain requirements will increase considerably.

Life teaches us that for a correct determination of grain production volumes in the future, we should definitely take into account the fact that we have droughts rather often (sometimes 2...3 times during a five year plan). Thus, the difference between maximum and minimum gross harvest over the past ten years was more than 53 tons. So the emergency grain reserve should not be lower than that level. Unfortunately, this factor has never been included in any five year plan; it is as if the responsible

officials in the USSR Gosplan [State Planning Committee] are not aware of this. In addition, the increasing demands of our society and the conditions in which our country finds itself objectively dictate that right now it is already necessary to have a gross grain harvest of not less than 300 million tons weighed at the warehouse. After the year 2000 these requirements naturally will increase and we have to prepare for that now.

The question arises whether these volumes are achievable in our country? Undoubtedly, yes, although great efforts will be required. After all, if we used to take the extensive path, plowing huge tracts of virgin land, then now there is only one path - the intensification of grain production in many directions. We need an effective state concept for this most important sector of our economy.

I would like to turn the attention of grain growers, specialists, farm managers and the planning organs to the volumes and structure of grain production in the USA. It is very useful to analyze these figures which were published in the press. Thus, in the USA in 1986, 209.6 million tons of corn were harvested; 54.6 - soybeans; 23.9 - sorghum; 56.8 - wheat; 13.3 barley and 6.1 million tons - rice. This is a total of 364.3 million tons.

In the USSR the gross harvest of all grains is 206 million tons, and of oil crops - 6...7 million tons, that is, 8 to 9 times less than in the USA, and as is known, they are a major source of complementary plant protein. This is a major cause of the large overexpenditure of grain and low productivity in the livestock industry. Therefore, the government in conjunction with the VASKhNIL [Lenin All-Union Academy of Agricultural Sciences] needs to elaborate a realistic program for the maximum possible increase in the production of high-protein plant feed. This program should first of all include scientific, economic and technical measures. Incentive and new equipment should be the core of such a program. And the State Commission on Food and Procurements, USSR Gosplan and the Ministry of Foreign Economic Relations should already begin to look for opportunities to purchase abroad as much soybeans, oil meal, and other high-protein feeds as possible.

Simultaneously with this, we should conduct large-scale programs to increase the capacity for processing oil crops

since it is well known that even the insignificant amount of sunflower, soybeans, rape which is produced in our country, is not processed in a timely fashion and that large losses occur in storage and processing.

Opportunities exist in the USSR to increase the production of plant and animal products but they are not being taken advantage of fully. I would like to emphasize just one question which has been a constant subject of conversation among livestock breeders for decades - supplying the public livestock industry as well as livestock in private plots with feed.

Can you really expect to achieve a high level of productivity in all kinds of livestock and low production costs for animal products if only 50-70 percent of the necessary amount of concentrated feed is available? Many rural residents cannot acquire concentrates for themselves.

In recent years we have constantly attempted to increase the production of fibrous and succulent feed. This is correct. You won't get high milk production and weight gains without good hay and silage. And even if we do have real experience, albeit not a great deal, in the production of these kinds of feed, we have much to do to increase production levels.

During my almost 40 years of professional experience I cannot remember a single instance when in reviewing accounts on farms, rayons, oblasts and autonomous republics, grain silage requirements were estimated to be 100-percent satisfied. And if in a farm or oblast the figure was 100 percent even by bunker weight, it was extremely rare and then the oblast, rayon or farm, naturally, received an additional obligation on grain sales to the state. The peasant knows very well that it is impossible to farm efficiently without a reserve supply.

An analysis of supply levels of concentrated feed shows that it is in the neighborhood of 75-85 percent of the required level, taking into consideration allocated state resources. This is precisely what leads to a large shortfall in livestock production.

Are there ways to resolve this most important, and I would even say, strategic task? Yes, there are! The basic laws which were ratified at the session of the USSR Supreme Soviet will exert a positive influence on the entire economy of our country including the development of the agroindustrial complex and, in particular, on the problem of grain production.

But it is possible to assert in no uncertain terms that these laws will be effective only if the government takes under its close control the most important issues pertaining to grain production which cannot be resolved by tenant lessees, individual farmers, cooperatives, associations, collective farms, state farms, rayons and even oblasts.

An applied-scientific concept is needed which personifies the main directions. Here are the most important ones.

First of all, on a countrywide scale ways to implement the achievements of world science in agricultural production must be determined and elaborated. Without science there is no forward movement. I am deeply convinced that we must seriously work on the issues of soil science, increasing soil fertility, and the broad utilization of biology, biotechnology and selection in order to resolve the problem of increasing grain production.

You cannot help but agree with the statement of USSR People's Deputy, Member of the USSR Supreme Soviet, Vice-President of the USSR Academy of Sciences K.V. Frolov that "neither social-political perestroika nor the economic reform will move a step farther than what the modern state of our science allows."

The blind allegiance to the teachings of Lysenko supported by Stalin set the development of biology, biotechnology, selection and seed raising in our country back decades. At the same time through a skillful and comprehensive utilization of genetics and selection remarkable high-yield and early maturing varieties of corn have been created in the West which could produce 50...70 and more centners per hectare even in the conditions of Siberia, the Urals and the Nechernozem regions. This is 2...3 times more than spring grain crops. Such examples exist in the Bashkir ASSR, the Tyumenskaya, Kurganskaya, Orenburgskaya, Tulsckaya, Ryazanskaya and many other oblasts.

At the same time on the pages of certain newspapers, on radio and television, you can often hear that our epic adventure with corn was a failure. Only people who don't know what they're talking about can say that.

A shortage of grain is forcing us to import both wheat and corn. According to data of the USSR Ministry of Foreign Economic Relations in just three years (1986-1988) 27.9 million tons of corn were purchased at a total price of 1.8 billion rubles. So the question arises, do you mean that our farms cannot produce corn in sufficient quantity? Without a doubt, they can. And then we can reallocate the freed resources to purchase soybeans.

In our country we need to develop corn varieties and hybrids with the kind of biological characteristics which will be either equal to or will surpass (without straining our capabilities) world standards on early maturation and yield. Our selection specialists have already made a good beginning. But in order to accelerate the selection process proper conditions must be created. Unusual, nonstandard decisions need to be made. If this is not done in the near future, we will not resolve the problem of the production of grain and animal products. Even clever and prudent tenant farmers will not produce any pork or eggs without grain. In my view a strong economic accountability association is needed in the selection, reproduction and cultivation of early maturing corn hybrids.

If initially there are insufficient early-maturing corn hybrids in the country, it would be economically more advantageous to purchase seed and not grain abroad and sign contracts with socialist and capitalist countries for several years.

There is yet another way. The creation in the country as soon as possible of joint ventures with foreign firms to produce early-maturing hybrid seed in the volume necessary. Calculations show that we must produce no less than 250...300 thousand tons of this seed. The foundation has been laid in the Rovenskaya oblast. There a joint venture has been created with the "Pioneer" firm. The results exceeded all expectations. In 1988 each hectare in the "Zarya" agricultural firm produced 102 centners of grain with a moisture content of 14 percent, and a yield of green matter of 700 centners per hectare. The Soviet-Austrian enterprise in the Rovenskaya oblast will produce 10 thousand tons of hybrid early-maturing corn. But this is only the beginning.

Experiments and calculations show that growing corn according to grain technology just in the RSFSR could be done on 12...13 million hectares and bring grain production levels to 50...60 million tons. At the Second Congress of People's Deputies First Secretary of the Ukrainian Communist Party Central Committee V.A. Ivashko declared that plans call for the doubling of corn production and bringing levels to 14...15 million tons per year, that is, approximately as much as is produced now in the country as a whole. And it is not a requirement at all that all the grain be in dry form. It can be utilized with great success at the milk stage with finely chopped silage. It is important that this kind of feed get to the feed troughs. The experience of our Bashkir, Ryazan and other grain producers confirms this. This is where we are not taking advantage of real opportunities at all.

Leaders and economists have often expressed their arguments and calculations in the press regarding high prices for industrial products, their discrepancy with increases in labor productivity, and the poor quality of agricultural machines. Everyone recognizes this. And yet the USSR Gosplan and Goskomsen [State Committee for Prices] are still yet to elaborate measures which would make it economically advantageous to expand grain production.

Prices have not been adjusted in the agroindustrial complex either. The current procurement prices with surcharges for livestock products are not equivalent to prices for grain, which it is several times more profitable to feed to livestock and sell animal products. It is not by accident that collective and state farms try to sell as little grain as possible to the state, often displaying a parasitical nature in obtaining grain from state resources. Results in 1989 are a stark confirmation of this. Although 211 million tons were produced, only 59 million tons were procured. So the state was forced to import last year 36 million tons.

The situation with the cultivation of proso and buckwheat demonstrates the lack of economic incentive for

the production of grain. How many resolutions have there been, how many appeals have been made, orders issued but production is growing at an extremely slow pace. There is a great shortage of buckwheat groats. This means that the economic mechanism which has been established to increase the production of hulled grains does not work. A new mechanism needs to be created.

Today in collective and state farms the contribution of grain production to profits, as was emphasized by CPSU Central Committee Secretary Ye.S. Stroyev, comprises only 14.6 percent and in 25 percent of farms grain production is not profitable. It is nothing other than a poorly planned pricing policy that has led to such negative results.

Really, how should we evaluate such absurd methods, when the state pays collective and state farms in the Povolzhye, the Ural region and other zones from 100 to 140 rubles per ton for wheat depending on quality while the farms are forced to "fork over" 180...200 rubles for unbalanced combination feed.

So the question arises: who and under what conditions is going to sell grain to the state? For a comparison - strong wheat brings up to 190 American dollars or 230 Canadian dollars per ton on the world market. The current elevated state plan-order also is not a means to accelerate production but to slow it down.

There is only one conclusion that comes to mind - increase procurement prices on grain, especially on strong and hard wheat, hulled grains, peas, soybeans, barley by 2 to 3 times. Procurement prices need to be increased already beginning this year.

And there's more. Since each year we spend huge amounts of hard currency resources on grain purchases abroad, we must boldly move towards paying hard currency for a considerable portion of the food grain produced here, according to prices which develop on the world market. Simultaneously, we must obligate the Ministry of Foreign Economic Relations to sign an agreement for the acquisition abroad of agricultural equipment, machines which the farms need to purchase for hard currency. In this way the hard currency would perform double duty: both for grain and for other goods.

There are many other economic incentives. But one thing is clear: a strong economic incentive is required and only incentive. Most importantly the economic mechanism should function. We need precision corn planters of the type that are being used in the Kurganskaya and other oblasts. They allow for precision spacing of the plants in the field. Excessive plant density in corn is one of the main causes of low yield. Our industry can manufacture that kind of equipment. The only thing that is needed is a firm state order. That can be done, undoubtedly, in a matter of two-three years.

The resolution of the grain problem to a large degree will depend on the availability of highly competent specialists and workers, their skill in implementing the achievements of world science in production. We already need to train personnel in the institutes of higher education and the technical schools. The professionalism of specialists must be several orders of magnitude higher. And for that not only theoretical knowledge is necessary but also the skill to put this knowledge into practice. It is necessary to create schools for managers in our country and to take advantage of foreign experience as much as possible.

Time, resources, and most importantly, persistence and consistency are needed for the resolution of these tasks. We cannot delay them for a single day.

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Achieving More Effective Grain Production

Change in Crop Structure Needed

904B0230A Saratov STEPNYE PROSTORY
in Russian No 1, Jan 90 pp 10-13

[Article by B. S. Markin, candidate of economic sciences, Elita Povolzhya NPO [Scientific production association], Saratov: "Changing the Structure of Grains!"]

[Text] In 1981-1988 in Saratov Oblast, grains occupied 3.8 million hectares, or 60 percent of the area in all crops. Of the area in grains, winter rye occupied 8.2 percent, winter wheat—9.7 percent, spring wheat—25.2 (including soft—15.7), barley—40.6, oats—3.2, corn—0.9, millet—9.2, legumes—2.2 and buckwheat—0.8 percent.

However, the structure that has developed and the distribution of crops in microzones do not answer the requirements for efficient use of arable land during an enterprise's transition phase to cost accounting. It does not achieve the effective use of the oblast's agroclimatic and economic resources. Ineffective spring crops predominate (primarily buckwheat and soft wheat) with small amounts of winter crops, millet, buckwheat and durum wheat, which achieve more profitable agricultural management.

An efficient structure must secure not only a high level of productivity and stability in grain production but the maximum profit per hectare of crops and the development of favorable conditions for the introduction of lease forms of organization and reimbursement of labor by means of decreasing the cost-accounting collective's need for manpower and equipment and by making the latter's amount of work uniform in the course of the vegetative period.

As you can see from Table 1, clear income obtained from the cultivation of winter crops and millet was higher by 35.7-94.6 rubles per hectare than that from soft wheat, barley and oats. At the same time in 1981-1988 the

former's proportion was lower by a factor of 2.2 than that of wheat, barley and oats.

For the consistent increase in grain production it is especially important to expand the area in winter crops on clean fallow. Their productivity is greater by a factor of 1.5-2.5 than that of spring crops. The normative increase in the grain harvest within the link that includes bare fallow (as compared to the link that includes occupied fallow) is 9.1 quintals per hectare in the chernozem steppe and 8.4 quintals per hectare in the extremely dry steppe. As farming is intensified it increases by a factor of 1.5-2.

Despite this, in many oblast enterprises the area in clean fallow and winter crops is lower by a factor of 1.5-2 than levels foreseen in recommendations of experimental institutions. Meanwhile, the experience of leading enterprises and the groupings that have been implemented clearly show that with growth in the proportion of winter crops within crop structure there is a considerable increase in grain productivity and in the economic effectiveness of grain production. Thus, on state variety plots (GSU) in Saratov Oblast in 1981-1988 the average productivity of winter crops on clean fallow comprised 30.6-38.8 quintals per hectare, of spring wheat—15.7-17.2, of barley—22.7 and of millet—20.2 quintals per hectare.

In the kolkhozes and sovkhozes of the first microzone, in which winter crops occupied over 40 percent of the area in grains, average productivity over five years was 22 percent higher and clear income per hectare was 84 percent higher than in enterprises in which winter crops occupied up to 20 percent of the area. Solely by increasing the area in winter crops without additional expenditures of manpower and assets clear income per hectare increased by 28.3 rubles, and on the entire area of grains (84,200 hectares)—by 2.3 million rubles.

In enterprises of the sixth, Transvolga, microzone the expansion of the area in winter crops from 8 to 20-25 percent increased average grain productivity from 10.6 to 13.4 quintals per hectare and clear income from 23.3 to 67.9 rubles per hectare. Here the production cost of a quintal of grain dropped from 9.06 to 6.93 rubles. Whereas with a small share of winter crops grain production was unprofitable, with a 20-25 percent share the profitability of the grain industry increased to 74.0 percent.

On the basis of arranged groupings and of the experience of progressive enterprises it has been established that an efficient level for concentrating the area of winter crops in grain crops, according to natural-economic conditions, is 35-45 percent in the right-bank microzones and 20-35 percent in the Transvolga zones.

Within the structure of winter crops, based on productivity and overwintering conditions, it is expedient to establish an efficient ratio between wheat and rye. According to general data from state variety plots of

oblast enterprises, rye is more winter-hardy and drought-resistant than wheat. It suppresses weeds more firmly and serves as one of the best predecessors for durum wheat. Its procurement price is 42 percent higher than that of soft wheat. As a result, both clear income and production profitability are significantly higher.

On the fields of the South-East NIISKh [Agricultural Scientific Research Institute] in 1976-1988 the average productivity of rye on clean fallow was 6.4 quintals per hectare (or 23 percent) higher than of wheat. The advantage in output of gross product and clear income is 221-226 rubles per hectare. The production cost of a quintal is 22 percent lower and the profitability of production is double that of wheat.

In oblast enterprises rye, despite its being planted after the worst predecessors, yields a greater gross product and a clear income that is 43-47 rubles higher than that of wheat; its profitability is higher by a factor of 2.2. Its advantages as the more winter-hardy crop are more evident in the Transvolga area. Whereas in right-bank GSU's its productivity is 23 percent higher than that of wheat, in the GSU's of the Transvolga region it is 33 percent higher.

With a consideration of climactic factors and the specialization of enterprises the approximate ratio between the two crops in right-bank regions should be equal. But in the Transvolga 60-80 percent of the winter fields should be put into rye and 20-40 percent—into wheat.

In addition to crop structure, the level of productivity of grain crops is greatly affected by the material-technical and manpower resources available to the enterprise. For this reason it is essential to supplement economic research methodology related to implementing groupings. Since within various groups of enterprises high productivity and production effectiveness indicators can be achieved not only by means of the effect of the factor being studied but also by means of larger assets, the groupings indicators must be supplemented by a determination of the production potential of enterprises (normative productivity of grains with a consideration of their available assets) and by the effectiveness of utilizing production potential (percent ratio of actual to normative productivity). This will enable us to distinguish the effects of the factors being studied and of available assets on grain production effectiveness.

Normative grain productivity (production potential) should be determined according to the following model.

$y = 0.0421x_1 + 2.196x_2 + 0.3132x_3 + 0.0116x_4 + 0.637x_5 - 2.512$, where y —grain productivity, quintals per hectare; x_1 —manpower resources, persons per 1,000 hectares of arable land; x_2 —energy resources, horsepower per hectare of arable land; x_3 —soil quality, points (according to the RSFSR scale); x_4 —material expenditures, rubles per hectare of grains; and x_5 —fertilizer, quintals of active substance per hectare of grains.

In addition to winter crops it is expedient to expand the area in millet, which, having a low transpiration coefficient and using precipitating during the second half of summer well, considerably surpasses spring wheat in level of productivity and hardness of grain production. This clear advantage is especially noted in Transvolga microzones where the climate is drier. Whereas in right-bank kolkhozes and sovkhozes the productivity of millet is six percent higher than that of spring wheat, in the Transvolga it is 68 percent higher. Clear income from millet in the microzones of the Transvolga is 31-102 rubles per hectare higher than from wheat and barley. Profitability is greater by a factor of 3-7. Despite this, the proportion of millet within grain structure does not exceed 7.7-13.0 percent in Transvolga microzones, and spring wheat's and barley's proportion is tenfold greater, which sharply curtails yield and profitability of grains.

An increase in the concentration of millet has a positive effect on growth of productivity and effectiveness of grain production. In enterprises of the sixth Transvolga microzone on the average for five years the increase in millet crops within the structure of grains from 5 to 15-20 percent increased productivity from 7.4 to 15.5 quintals per hectare, and clear income from 22.9 to 167.1 rubles per hectare. At the same time, the production cost of a quintal of millet grain decreased by a factor of 1.9 and production profitability increased by a factor of 2.1.

In this same microzone with an expansion of the area in millet from 5 to 20-25 percent of the area in grains the average productivity of grains increased by 62 percent and clear income—by 77.1 rubles per hectare. The production cost of a quintal of grain dropped by a factor of 1.7 and labor expenditures—by a factor of 2.2. The effectiveness of utilizing the production potential of the grain industry increased by a factor of 1.6 (see Table 2).

Calculations have shown that 92 percent of the increase in grain yield (4.9 quintals per hectare) has been obtained by means of the increase in the effectiveness of utilizing production potential related to improvements in grain structure, and only eight percent of the increase (0.4 quintals per hectare) is the result of more available assets in enterprises where millet constitutes 20-25 percent of their structure.

This data confirms the economic expediency of expanding the area in millet in the Transvolga to 20-25 percent and to 10-15 percent in right-bank regions. In addition to this crop on the right bank it is expedient to cultivate buckwheat as well, concentrating it in enterprises of the first, second and third microzones.

The clearest advantage of millet and winter crops is manifested during dry and very dry years, when the

oblast's enterprises suffer the greatest losses from drought. In 1987 in the dryer southeastern microzone average millet productivity was higher by a factor of 4.5 than that of spring wheat. In six of our experimental-production enterprises on the average for five extremely dry years (in the period 1970-1988) average productivity of winter crops and millet was higher by a factor of 1.9-2.4 than of spring wheat. Whereas the cultivation of spring wheat and barley during such years was unprofitable, millet and winter crops yielded up to 23-45 rubles per hectare of profits.

The agrotechnical basis for the struggle against drought in the Transvolga comprises a rational coordination of winter crops and early and late spring crops capable of effectively utilizing precipitation during various vegetative periods to develop the harvest.

Stable grain production in Saratov Oblast is achieved only if grain structure includes at least 40-50 percent winter crops and millet. In the kolkhozes and sovkhoses of the sixth Transvolga microzone in this case the average grain productivity was greater by 4.5 quintals per hectare or by 50.5 percent than in enterprises in which they occupied up to 20 percent of grain fields. The production cost of a quintal of grain decreased by a factor of 1.6 here.

The data that has been obtained shows that solely by improving the structure of sowing area, without additional expenditures of labor and assets, the productivity of grain crops and the effectiveness of utilizing production potential can be increased by a factor of 1.5. This large reserve for increasing the effectiveness of grain production, which does not require additional expenditures, should be maximally used in every enterprise within the oblast.

Saratov Oblast has favorable conditions for obtaining high-quality durum wheat seed. However, during the 1980's the area in this valuable crop decreased without justification. Whereas in the 1960's it covered 906,000-1,233,000 hectares (21-29 percent of grain structure), in 1981-1988 it covered only 360,000 hectares (9.5 percent). The curtailment occurred due to its low productivity and to poor material interest in producing it. However, in recent years procurement prices for first class durum wheat have increased to 37.5 rubles per quintal, second class—to 30.0 and third class—to 22.5 rubles per quintal with a procurement price for soft wheat of 10.2 and for barley of 9.8 rubles per quintal. In facilitating the production of high-quality grain, durum wheat, which is inferior to many crops in terms of productivity, surpasses them in amount of clear income per hectare because of the large supplements to procurement prices. At Krasnokutskaya Experimental Station on the average for five years the productivity of durum wheat was 14.2 quintals per hectare, of soft spring wheat—17.7 and of winter wheat—31.5 quintals per hectare. Clear income from first class grain equalled 345 rubles per hectare, which is 36-184 rubles higher than from winter and spring wheat. The data that has been

obtained confirms the economic expediency of expanded durum wheat crops with the introduction of all the elements of intensified cultivation technology. For example, in 1985 in Yershovskoy and Yeruslanskoye OPKh's durum wheat yielded 17.2-24.8 quintals per hectare of first class grain using intensive technology. Additional expenditures related to intensive technology were fully reimbursed and clear income comprised 307-551 rubles per hectare, which is higher by a factor of 13-25 than on the average for grains in the oblast.

Research by the South-East NIISKh and the experience of kolkhozes and sovkhoses in Saratov Oblast have shown that producing first class durum wheat is possible not only in the Transvolga but also in right-bank regions, where it will yield high and stable harvests. According to our calculations, 180,000-220,000 hectares should be occupied in this crop on the right bank, and 380,000-420,000 hectares in the Transvolga, which will guarantee the production of 550,000-650,000 tons of gross yield and 350,000-450,000 tons of commodity grain. To produce high-quality grain enterprises that cultivate durum wheat must be fully supplied with fertilizer, chemical plant-protection agents and the necessary equipment. Only in this case will such expansion be economically justified.

In addition to the scientifically-based grain structure, an effective level of grains concentration within total arable land area should be established in each oblast enterprise, depending on specific conditions. The idea that with an expansion of grain crops at the expense of fallow, feed and other groups of agricultural crops there will be an increase in gross grain yield is unjustified. In Transvolga kolkhozes and sovkhoses having up to 60 percent grains to arable land area, average productivity during the 11th Five-Year Plan was 4.6 quintals per hectare (50 percent) and grain output (per 100 hectares of arable land) was higher by 63.8 quintals (9 percent) than in enterprises in which grains occupied over 70 percent of arable land. The production cost of a quintal dropped by 10 percent and clear income increased by 67 percent.

In right-bank enterprises the best economic indicators were achieved by a grouping in which grains occupied up to 52 percent of arable land. Here, in comparison to enterprises in which over 58 percent of arable land was sown in grains, productivity was 21 percent higher and clear income per hectare—93 percent higher. The proportion of grains on the right bank is more advantageous up to 50-55 percent, and in the Transvolga—up to 55-60 percent of the area of arable land.

An especially sharp drop in grain productivity was noted when early spring crops (barley, oats and spring wheat) were excessively expanded. For example, in the kolkhozes and sovkhoses of the sixth microzone, with up to 15 percent of the grain structure in spring wheat, the grain harvest was higher by a factor of 1.7 and clear income—by a factor of 8.1 than in enterprises in which spring wheat occupied 40.7 percent of the area (see Table 3).

A drop in the effectiveness of grain production with an increase in the proportion of spring wheat is related to the fact that the zone's enterprises are poorly involved in improving quality—soft wheat predominates within the structure, and the production of class grain of strong and durum varieties with supplements for quality is insignificant. The effectiveness of wheat grain production will increase sharply if the area in durum wheat is larger by a factor of 2.0-3.5 than the area in soft wheat, and if the zone's enterprises deliver only class grain.

The structure of grain forage crops also requires further improvements. The current structure does not meet the needs of intensive development of livestock raising—it includes a small supply of digestible protein, which leads to the overexpenditure of feed and to a growth in production costs.

The area in legumes should be increased to 200,000-220,000 hectares. It is expedient to concentrate the production of peas in the right bank region and of chick peas—in the Transvolga region. The area in seed corn being cultivated according to intensive technology should be increased to 200,000 hectares. In the Transvolga regions by decreasing the area in barley as seed-farming is strengthened it would be expedient to expand the area in grain sorghum as a drought-resistant and salt-resistant crop. The area in oats must be stabilized on a level of 120,000-140,000 hectares concentrated in Pravoberezhye.

In this way, in order to increase the effectiveness of utilizing agroclimatic, labor and material-technical resources in Saratov Oblast the area of clean fallow must be increased to 930,000 hectares, which will enable us to increase the area in winter crops to 1.1-1.2 million hectares instead of 679,000 hectares on the average for 1981-1988. Within the structure of grains it is expedient to

have 30-33 percent winter crops (including 20-21 percent winter rye), 23-25 percent spring wheat (including durum), 14-15 percent millet, 12-14 percent barley, 5-6 percent legumes, 4-5 percent corn for grain, 3-4 percent oats and 1-2 percent buckwheat. This will enable us to increase the productivity of grain crops and the stability of production by 8-10 percent. The production cost of gross production will increase by 20-23 percent and clear income and profitability of grain production will increase by a factor of 1.7-1.9. The economic effect of improving the structure of grain crops by means of growth in clear income and profits of oblast kolkhozes and sovkhoses will equal 60-69 million rubles.

In contrast to other directions of intensification, improving the structure of the sowing area will not require additional expenditures of manpower and assets; on the contrary, the expansion of the area in winter crops and millet and the related curtailment of the area in early spring crops will decrease the stress of carrying out spring sowing and harvesting work and will decrease the needs of the grain industry for manpower and sowing and harvesting units by 30-35 percent.

Within the structure of marketable grain, by curtailing the procurement of barley by a factor of 1.5-2 the proportion of winter rye, durum wheat, millet, buckwheat, and legumes, of which there is always a shortage, will increase. The transition to this kind of crop structure will secure complete assimilation of scientifically-based crop rotations and the efficient distribution of the most valuable crops among predecessors, which will have a positive influence on increasing soil fertility and on the growth of productivity for all crops in the crop rotation.

Everyone who is interested in the given research may write to: 410020, Saratov, Tulaykova Street, House 10, Apartment 81. Telephone 17-55-46. Markin, Boris Kuzmich.

Table 1: Economic Effectiveness of Cultivating Grain Crops in Saratov Oblast, On the average for 1981-1988

Crop	Productivity, quintals/hectare	Received, rubles/hectare		Production cost of 1 quintal of grain, rubles	Profitability, percent
		Gross production	Clear income		
Winter rye	13.9	201.5	88.6	8.12	78.5
Winter wheat	15.5	158.1	41.1	7.55	35.1
Spring wheat	7.4	89.7	3.4	11.66	3.9
including soft	7.6	77.5	-6.0	10.99	-7.2
including durum	7.3	109.5	18.7	12.44	20.6
Barley	10.4	101.9	5.4	9.28	5.6
Oats	10.5	102.9	5.4	9.29	5.5
Corn	22.2	244.2	21.4	9.72	13.1
Millet	10.8	167.4	68.0	9.20	68.4
Buckwheat	4.8	192.0	73.4	24.71	61.8
Legumes	6.6	132.0	16.9	17.44	14.7
Total grains	10.4	120.0	22.0	9.42	22.4

Table 2: Grain Production Effectiveness in Enterprises of the 6th Microzone, Depending on Proportion of Millet in Grain Structure, average for 5 years

Indicators	Groups of indicators according to proportion of millet within grain structure, percent				
	up to 5	5.1-10	10.1-15	15.1-20	20.1-25
Number of enterprises in the group	7	27	23	13	23
Productivity of grains, quintals/hectare	8.5	10.3	12.3	14.3	13.8
Effectiveness of using production potential, %	80.2	92.0	107.9	117.2	125.4
Expenditures per quintal grain:					
rubles	12.06	10.33	7.62	7.31	6.86
man-hours	1.84	1.44	0.90	1.00	0.84
Obtained per hectare, rubles:					
gross production	95.7	117.4	146.4	164.4	165.1
clear income	-6.4	11.0	52.7	59.9	70.7
Profitability level, %	-6.3	10.3	56.2	57.3	74.9

Table 3: Effectiveness of Grain Production in the Enterprises of the 6th Microzone, Depending on Proportion of Spring Wheat in Grain Structure, average for 5 years

Indicators	Groups of enterprises according to proportion of spring wheat in grain structure, %				
	up to 15	15.1-20	20.1-25	25.1-30	over 30
Number of enterprises within the group	16	27	23	10	13
Proportion of spring wheat, %	11.1	17.6	22.1	27.1	40.7
Productivity of grains, quintals/hectare	15.1	12.9	12.2	9.6	8.8
Degree of use of production potential, %	122.8	117.5	108.8	86.6	81.9
Expenditures per quintal of grain:					
rubles	6.93	7.48	8.57	10.14	10.55
man-hours	0.81	0.99	1.12	1.70	1.14
Obtained per hectare, rubles:					
gross production	179.7	154.8	141.5	104.6	102.1
clear income	75.1	58.3	37.0	7.3	9.3
Profitability level, %	71.8	60.4	35.4	7.5	10.0

Wheat Crop Structure Discussed

904B0230B Saratov STEPNIYE PROSTORY
in Russian No 1, Jan 90 p 13

[Article by N. V. Pavlov, candidate of agricultural sciences, Saratov Economics Institute: "The Accounts Do Not Please Us..."]

[Text] In recent years the proportion of food grain (winter and spring wheat, rye) in gross yield has

decreased from 61 to 51 percent. At the same time there has been an increase in the proportion of feed grain (barley, corn, oats, legumes) to 45 percent. The proportion of groats crops (rice, buckwheat, millet) remains unchanged. The production levels that have been achieved are clearly inadequate. In qualitative terms they do not meet the needs of the food industry.

In order to increase the production of livestock products significant growth in gross feed grain yield is necessary.

Due to the shortage of barley, oats and corn in 1987 the mixed feed industry used 10.5 million tons of wheat. Economically this is totally unjustified because in its feed properties (digestibility) wheat is considerably inferior to barley.

During the last decade Transvolga kolkhozes and sovkhozes have been fulfilling the plans for the delivery of grain to the state, including of durum and strong wheat varieties. Whereas in 1983-1984, preceding the introduction of intensive technologies, an average of 3.7 million tons of strong wheat, 8.9 million tons of valuable wheat and 0.2 million tons of quality durum wheat were procured, in 1985-1986 the corresponding figures were 8.9, 14.9 and 1.1 million tons, and in 1986—10.9, 16.9 and 1.4 million tons. In 1987 the procurement of strong wheat comprised 7.2 million tons, of valuable wheat—11 million tons and of durum wheat—1.0 million tons.

The sowing area in durum wheat in Volgograd Oblast decreased by 36 percent during the 11th Five-Year Plan compared to the 10th, while winter wheat, including durum and valuable, increased by 23.1 percent. By 1995-2005 it is planned to produce about 150,000 tons of durum wheat annually.

In Kuybyshev Oblast winter wheat crops, primarily of the strong and valuable varieties, increased by 43.9 percent and spring wheat crops decreased by 30.4 percent. As a whole the area in grains decreased by 13.2 percent. It is essential to note that in 1986 positive changes took place within the oblast. As a result of the expansion of the area under intensive cultivation technology to 409,000 hectares (23.1 percent), there was significant growth in the sale of strong and durum wheats. Whereas during the 11th Five-Year Plan on the average 61,000 tons of durum, 32,000 tons of strong and 40,000 tons of valuable wheat were sold, in 1986 more was sold by a factor of 2-3. On the average for the years of the 11th Five-Year Plan the plan for sales to the state was fulfilled by 27.3 percent for durum wheat and by 76 percent for strong wheat.

In Saratov Oblast during that same period the area in both durum and strong wheat decreased by 35.1 and 25.1 percent respectively, and in comparison to the Ninth Five-Year Plan—by 50.8 and 17.2 percent. Moreover, there was a decrease in the area in grains of 11.1 percent in general. At the same time there was an increase in the area in barley by 16.1 percent, and in comparison to the Ninth Five-Year Plan—by 31.9 percent. In 1988 the area in durum wheat increased to 17,900 hectares and in 1990 it may reach over 57,500 hectares.

During the 11th Five-Year Plan the enterprises of Volgograd Oblast sold the state 6,700 tons of durum (quality) wheat and 182,900 tons of strong wheat as compared to the planned 700,000 and 222,000 tons respectively. In the oblast preference is given to the production of soft varieties of (strong) wheat and forage grain.

The proportion of strong and valuable wheat in total grain yield in the Tatar ASSR and Penza Oblast has equalled from 5.0 to 5.8 percent in recent years.

During three years (1985-1988) in the enterprises of Ulyanovsk Oblast the introduction of intensive technology has resulted in the addition of 8.1 quintals per hectare; the procurement of valuable wheat has increased here. Whereas in 1981-1985 13 percent of gross yield consisted of valuable wheat, in 1986 the figure was 65 percent and in 1987—35 percent. The last result points to the fact that oblast specialists should focus attention on improving the crop rotation scheme; they must introduce an accounting-balance method for dosages of organic and mineral fertilizer when cultivating crops according to intensive technologies with a consideration of soil, tissue and leaf diagnostics.

Cultivating durum wheat grain is a national task. Its sowing area is concentrated in the southeastern oblasts of the European part of the RSFSR (steppe rayons of the Transvolga). Nevertheless, in recent years its distribution throughout regions was implemented unfavorably for the production of high-quality grain. In view of the fact that prices for strong and durum wheat grain were practically the same in the past and that the yield of soft wheat is usually higher during dry years, durum wheat began to be moved to areas with more precipitation to the detriment of grain quality. This has been observed in the dry steppe regions of Saratov and Volgograd oblasts, which since time immemorial have been growing grain that meets the highest requirements of the world market, and where during the 11th Five-Year Plan the area in durum wheat decreased unjustifiably. In Saratov Oblast during this period the plan for the sale of durum wheat comprised a total of 13 percent and of strong wheat—38.7 percent. On the average for 1986-1988 on an area of 350,000-378,000 hectares 293,000 tons of durum wheat were produced. The "Durum Wheat" program of Elita Povolzhya NPO plans to increase durum wheat production to 500,000 tons in the oblast by 1995, i.e., by a factor of 1.7. But to do this it is essential to provide oblast enterprises with quality seed. We must introduce special crop rotations, provide intensive cultivation technologies with equipment and control units, build covered threshing floors and storehouses in specialized enterprises, supply equipment for partially readying seed and introduce progressive forms of organization and wages. Undoubtedly these conditions must be created in all enterprises of the Transvolga where it is possible to raise durum wheat varieties.

Anyone interested in the research proposals may write to the following address: 410760, Saratov, Radishchev Street, 89. Telephone 26-74-04. Pavlov, Nikolay Vasilyevich.

Four Steps Toward a Solution

904B0230C Saratov STEPNYE PROSTORY in Russian No 4, Apr 90 pp 12-16

[Article by V. I. Loskutov, agronomist: "Grain." Article in this issue deals with material related to 904B021I, dated 11 May 90]

[Text] In the press and in the means of mass information there have been reports on several occasions that our country has been buying large quantities of grain abroad for many years, and not only grain but many livestock products as well, the shortage of which is to a large degree based on the shortage of concentrated feed.

Data from the ministry of foreign trade, later the ministry of foreign economic relations, fairly clearly attests to the extensive imports of grain and to the systematic growth of this procurement. Here is the data on grain procurement (without groats) abroad (see Graph 1). From this data it is not difficult to draw the conclusion that the crisis in grain production in our country began long ago. It has not been eliminated in the 12th Five-Year Plan either.

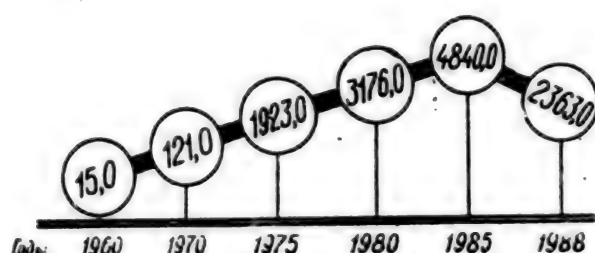


Figure 1: Graph of monetary expenditures for procurement of grain abroad, in millions of rubles.

Here we should especially emphasize that grain procurement abroad has been increasing in recent years (see Graph 2).

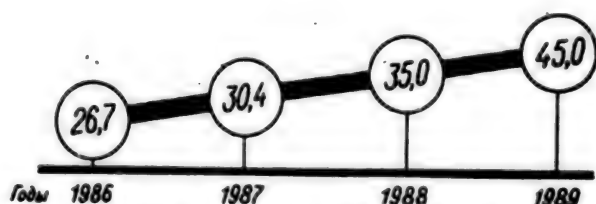


Figure 2: Graph of growth of grain procurement abroad, in millions of tons.

Naturally, this process does not leave anyone indifferent. Hard currency resources disappear across the ocean instead of remaining in our country. It is therefore no accident that the problems of grain production and its effective use were the subject of discussions at a meeting of the CPSU Central Committee Politburo in November of the past year. The government is developing a national grain program for 1991-1995. I would like to express certain ideas and proposals on this subject as well as make a judgement about the actual situation involving grain production in our country.

I am assuming that if I speak honestly about the real situation involving grain production it will be seen as a call, as sounding an alarm to double and triple our efforts to increase production.

In the press and in other means of mass information there are reports that we produce more grain than EEC countries—all we have to do is curtail losses, they say, and the problem will be solved. It is an axiom that losses must be curtailed at all stages of production and use. But assurances that 240-250 million tons will suffice for us is nothing more than a delusion. This means that with an orientation toward such figures no determination will be made of ways to deal with many extremely important economic tasks as concerns the development of science, agricultural machine building, construction and others that require large capital investments. At the fourth kolkhoz congress M. S. Gorbachev emphasized that during the next, 13th, five-year plan we must achieve new high goals—260-280 million tons of grain annually. However, in my opinion this quantity is also too small.

Let us analyze the results of grain production during the last four five-year plans (see Table 1).

Table 1: Grain Production in the USSR (data from USSR State Committee on Statistics)

	1966-1970	1971-1975	1976-1980	1981-1985	1986-1989
Average per year, millions of tons	167.6	181.6	205.0	180.3	206.6

At the present time in official reports and in the speeches of many administrative workers emphasis is being placed on the fact that during the 12th Five-Year Plan average annual grain production increased by 26 million tons in comparison to the preceding five-year plan. A corresponding percentage growth results.

I would like to analyze this data more thoroughly in order to clarify what is actually occurring in grain production and to answer the question of why we purchase large quantities of grain abroad. At the same time I wish to make specific proposals about increasing grain production in our country and about using grain effectively.

For this it is essential to make a comparative analysis in several directions. Let us pose a question: What results have been achieved in the seven years after the May 1982 Plenum of the CPSU Central Committee, which confirmed the Food Program? As we know, the CPSU Central Committee Plenum confirmed six resolutions of the CPSU Central Committee and USSR Council of Ministers. All of them have been published in the press.

A rightful question arises: What influence did the resolutions that were passed have on increasing the production of grain—the most important product in agriculture? If we compare grain production on the average for seven years prior to the May 1982 CPSU Central Committee Plenum the following picture becomes clear—in 1976-1982 grain production on the average per year equalled 195.7 million tons, and after the introduction of economic incentives that went into effect in 1983, i.e., in

1983-1989—197.6 million tons. Thus, during these years growth in grain production equalled only 1 percent. I would like to emphasize especially that for comparing and correctly assessing the action of economic measures we must take precisely such periods of time—any other comparison would be imprecise or the result of an interplay of forces.

But this is not yet the main indicator. The most objective criteria is the indicator of per capita grain production. But neither Goskomstat, the government or administrative workers report on this indicator.

From the published data on the USSR population it is not difficult to calculate how much was produced during the years prior to the plenum and after it. In 1976-1982 on the average per year per capita production equalled 746 kilograms, and in 1983-1989—708 kilograms, i.e., there was a decrease of 38 kilograms, or of 5.1 percent. In other words the size of the population is growing but grain production per person is falling. We cannot leave this tendency unnoticed.

The economic stimuli developed by the May 1982 CPSU Central Committee Plenum for the production of the main agricultural product, grain, did not have a positive effect.

Now let us compare grain production in the current five-year plan with the results of the Ninth and 10th five-year plans on a per capita basis (see Table 2). This data attests to the fact that in per capita grain production in the 12th Five-Year Plan we are on the levels of the Ninth Five-Year Plan.

Table 2: Per Capita Grain Production in the USSR, kilograms

	1971-1975	1976-1980	1981-1985	1986-1989
On the average per year	730	788	665	731

In order to avoid errors in discovering tendencies, let us analyze grain production in absolute data and per capita during the last 19 years—for 1971-1980 and 1981-1989. I think that that kind of comparison is most objective and methodologically correct (see Table 3).

This data shows that things are not going well in terms of grain production in our country. The population is increasing and per capita production is decreasing. We need immediate action for the next 2-3 years and large-scale measures to the year 2000 and further.

Table 3: USSR Grain Production in 1971-1989

	1971-1980	1981-1989	1981-1989 in percent of 1971-1980
Average annual grain production, millions of tons	193.3	192.0	99.3
Average annual population size, million of persons	254.4	276.4	108.4
Per capita grain production, kilograms	760	695	91.4

We expend almost double the grain that EEC countries do. They produce more livestock products than our country. This question deserves the most thorough study. The effectiveness of livestock raising depends on a number of factors, but one thing is clear—in the European countries a decrease in grain expenditures is proceeding with the simultaneous growth in the expenditure of high-protein feed. Data from the All-Union NII [Scientific Research Institute] for Information and Technical-Economic Research in Agriculture attests to the fact that in EEC countries the share of high-protein feed in mixed feed is constantly increasing. In recent years up to 25-28 million tons have been expended there. The ratio between grain and high-protein feed in mixed feed has reached 2.6:1. In our country, of course, we do not have such a large amount of protein feed in our mixed feeds.

Each year our population's size increases by 2.5 million persons. If we consider the future and suppose that during the coming 20 years the population size will increase at the same pace, by 2009 it will increase by 47 million and will comprise about 334 million persons. This means that the need for grain will also increase.

In order to correctly determine grain production volume for the future we must also consider the fact that in our country, whether we like it or not, drought is a frequent visitor—sometimes 2-3 times per five-year plan. The difference between maximum and minimum gross yield during the last 10 years has equalled over 53 million tons. In other words this kind, or an even larger, grain reserve should be stockpiled as insurance. Unfortunately, during all the years of the five-year plans this circumstance has not been taken into account, as if USSR Gosplan's responsible workers are not in charge of this. In other words, the growing need of our society and the conditions under which our country finds itself objectively dictate that we already now have a gross grain yield of no less than 300 million tons, and not in bunker but in granary weight, without litter and water.

The question arises: Can we achieve such a volume in our country? There is only one answer—yes, without doubt, we can. It will take considerable effort. After all, whereas previously we travelled the extensive path, plowing up enormous masses of virgin land, today there is only one path—intensification of grain production in many directions. We need a solid government concept on this important direction in our economy.

I would like to direct the attention of grain farmers, specialists and directors of enterprises and planning organs on the volume and structure of grain production in the U.S. In 1986 the U.S. harvested 209.6 million tons of corn grain, 54.6—of soybeans, 23.9 of sorghum, 56.8 of wheat, 13.3 of barley and 6.1 million tons of rice, for a total of 364.3 million tons.

In the USSR gross grain yield equals 206 million tons and of oil-bearing crops—6-7 million tons, i.e., less than in the U.S. by a factor of 8-9, and the U.S., as we know, is the largest source of vegetable protein. Here is the basic reason for the large overexpenditure of grain and the low productivity of livestock raising. For this reason the government and VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin] must develop a realistic program to maximally increase the production of high-protein vegetable protein. This program must include, first and foremost, scientific, economic and technical measures. Interest and the latest technology must be the backbone of such a program. Now the State Commission for Food and Procurement, USSR Gosplan and the ministry of foreign economic relations must find possibilities for maximally procuring primarily soybeans, oilseed meal and other high-protein feed abroad.

At the same time extensive work must be carried out to increase capacities for processing oil-bearing crops because we know that even the insignificant quantity of sunflowers, soybeans and rape that our country produces is not processed in a timely manner and that great losses are tolerated during storage and processing. In this way the problem of increasing the production of high-protein feed by means of farming is closely interwoven with processing and storage.

Is it possible to achieve a high level of productivity of all varieties of livestock and a low production cost of livestock products if the supply of concentrated feed in many enterprises equals 50-70 percent, and in a number of cases—even less? Village private plots are supplied even more poorly. Many village residents cannot acquire concentrates for themselves because the latter are not being sold. If they do appear, they are released in the most minimum quantities. It is under these kinds of circumstances that we want to produce more livestock products while faced with a considerable feed shortage.

It is possible to maximally increase livestock production output, and especially that of meat, in the private plot under one condition—if every village resident is able to buy concentrated feed at a reasonable price at any time of the year in village stores when he needs them. Kolkhoz

farmers and sovkhoz workers must be fully supplied with these feeds without any limitations. This process must be facilitated in every way possible so that there will be more and more people interested in raising livestock and poultry.

In recent years we have constantly been giving attention to increasing the production of coarse and succulent feeds. This is correct. Without good hay, silage and haylage one cannot achieve large milk yields and weight gains. Whereas in the production of coarse and succulent feeds we have a small but real plus, we must do a great deal to increase grain production. Very little attention is being given to this key problem even though the corresponding resolutions have been passed.

We know that in examining the grain balance in enterprises, rayons, oblasts and ASSR's very rarely did we find an accounting of grain forage supplies of 100 percent. If an enterprise or oblast did have 100 percent of its supply, even in bunker weight, then the oblast, rayon or enterprise was naturally given an additional assignment on delivering grain to the state. The peasant knows well that without an insurance reserve it is impossible to manage successfully.

An analysis of concentrated feed supplies shows that they comprise 75-80 percent with a consideration of allocations from state resources. It is this that results in the large shortfall in livestock products.

I would like to emphasize that in connection with the perestroyka that has begun in our country all workers, both in the center and locally, must develop new ideas oriented at doing everything possible to increase grain production in our country within a short period of time.

Are there ways to deal with this important economic and, I would say, strategic task?

Yes, there are!

What do they consist of? The main direction, of course, remains solving a complex of social problems in the village.

The basic laws that have been examined and passed at a session of the USSR Supreme Soviet and others that have been published for national assessment—I have in mind laws on property, on leasing, on land, on state enterprises and others—will undoubtedly have an enormous positive effect on our country's entire economy, including on the development of the agroindustrial complex and in particular, on the problem of grain production.

But with all certainty we can confirm that these laws can act as an impediment if the state, or more precisely, the government does not take into its hands and under its unabating control the most important problems dealing with grain production that cannot be solved by lessees, farmers, cooperatives, associations, or kolkhozes and sovkhozes of the rayon and even of the oblast.

We need a state scientific-practical concept that will embrace all main directions. I will enumerate them briefly.

First, on the national scale ways to actively introduce the achievement of world science in agricultural production must be determined and developed. Without the introduction of scientific achievements there is no movement forward. I am firmly convinced that to solve the problem of increasing grain production we must seriously and for a long time to come take up the colossal possibilities that are found in scientific achievement as regards soil science, increasing soil fertility and the extensive use of biology, biotechnology and breeding. Only a thorough knowledge of plant biology and the use of the most progressive technology for each crop can help to quickly and assuredly solve the problem of increasing grain production with minimum expenditures of manpower and assets.

We cannot but agree with the assurances of Academician K. V. Frolov, USSR People's Deputy, member of the USSR Supreme Soviet and Vice-President of the USSR Academy of Sciences, who emphasized that "neither social-political restructuring nor economic reform will move us a step beyond what the condition of our science allows us to" (newspaper IZVESTIYA, 4 Dec 89).

"Lysenkovshchina" [the Lysenko period] with Stalin's support pushed the development of biological science, biotechnology, breeding and seed farming decades back in our country. At the same time in the West with the skilful and varied use of genetics and breeding excellent high-yield and very rapidly maturing corn varieties were developed that even under the conditions found in Siberia, the Urals and the Non-Chernozem Zone will provide a grain yield of 50-70 and more quintals per hectare. This is more by a factor of 2-3 than spring spike crops yield. Such examples exist in the Bashkir ASSR and Volgograd, Saratov, Penza, Tyumen, Kurgan and many other oblasts.

At the same time on the pages of some newspapers, on the radio and on television one often hears that the epoch of corn has passed and failed. What can be said in this regard? Only people who are very far from the truth, who do not know the essence of the situation, who look only at the perversions, who are not knowledgeable or who are anxious to please could make these assurances. We have not overcome this even yet.

During the last 5 years in many of our country's oblasts, krays and ASSR's convincing experience has been accumulated of enormous possibilities for increasing grain production by means of corn. This is emphasized in the resolution of the CPSU Central Committee Politburo which examined the problem of grain production in November 1989. I can confirm that the biology of corn enables us to produce 100 and more quintals of grain per hectare. Practical experience confirms this. In nature there is no grain crop that has as many uses as corn.

But the main hindrance is the shortage of rapidly-maturing hybrid seed of the Nordika type. I emphasize rapidly-maturing, and not hybrid seed in general. This is the chef d'oeuvre for the Non-Chernozem Zone, the Transvolga, the Urals and Siberia. In our country we have no such hybrids as of yet. It is to the point to say that 25 years ago we also had this kind of chef d'oeuvre called Voronezhskaya-76, and then Bukovinskiye hybrids Number 1 and Number 2. This corn matured in Sverdlovsk, Tyumen and Perm oblasts, not to mention in the more southern regions. Specialist who worked with it know this well.

But because of the lack of attention, misunderstanding and undervaluing during the years of buildup that with which our kolkhozes and sovkhozes were armed was lost. A great deal of time has passed since then. World science has taken an enormous step forward in breeding grain crops. Now we must look at the production of corn for grain in our country from the point of view of the achievements of world science. In connection with this I will present data on corn production in our country and in the U.S. Of course the bioclimatic potential in the U.S. is incomparably higher than in the USSR, and yet an analysis of the structure of grain production forces us to think about the fact that corn makes up 7-8 percent of total corn production in the USSR and in the U.S.—more than half.

The shortage of grain forces us to import both wheat and corn. According to data from the USSR Ministry of Foreign Economic Relations in three years alone (1986-1988) we procured 27.9 million tons of corn worth 1.8 billion rubles. A question arises: Can't our country's kolkhozes and sovkhozes produce enough corn? Without doubt they can. The freed resources should be directed into procuring soybeans.

In connection with this we must clearly develop a policy on this important state question. We are speaking about producing, in the shortest possible time, corn varieties and hybrids with biological qualities that surpass (without strain) world standards on maturation and productivity. Our breeders have already made good headway. To accelerate breeding even more it is essential to create all the necessary conditions for breeders, NII's and enterprises, to announce a competition for developing rapidly-maturing corn varieties and to extensively utilize material rewards for specialists and collectives, including allocating large monetary prizes, automobiles, state awards and so forth. In other words, we must seek a unique, non-standard solution with a consideration of all expenditures already in 1990 and in the first years of the 13th Five-Year Plan. If this is not done in the 13th Five-Year Plan then we will not solve the problem of producing grain and livestock products. Even smart and thrifty lessees will produce neither pork, nor poultry, nor eggs without grain. This is an axiom.

In order to solve these problems it is essential to create a large cost-accounting Association for the Breeding,

Reproduction and Cultivation of Rapidly-Maturing Corn Hybrids. Talented scientists and organizers must head this association.

If at first the country does not have enough rapidly-maturing hybrids of native varieties it is economically more advantageous to procure seed and not grain abroad after concluding a contract with socialist and capitalist countries for several years. There is another way—this is the creation in the country within a short period of time of joint ventures with foreign firms to produce rapidly-maturing hybrid seed in a quantity that will enable us to sow corn on all areas in the Non-Chernozem Zone, the Transvolga, the Urals and Siberia. Calculations show that no fewer than 250,000-300,000 tons of such seed must be produced. A beginning has been made in Rovno Oblast. There a joint venture has been created with the firm Pioneer. Results have exceeded all expectations. In 1988 every hectare in Zarya Agricultural Firm yielded 102 quintals of grain with a moisture content of 14 percent, and the productivity of green mass equalled over 700 quintals. A Soviet-Austrian enterprises in Rovno Oblast will produce 10,000 tons of early corn hybrid seed. This is not a solution to the problem but only a good beginning.

Experience and calculations show that in the RSFSR alone corn can be cultivated according to grain technology on an area of 12-13 million hectares and corn grain production can be increased to 50-60 million tons. At the second congress of people's deputies V. A. Ivashko, First Secretary of the Ukrainian CP Central Committee, announced that the republic plans to double corn production and to increase it to 14-15 million tons per year, i.e., approximately the amount that is now produced in the country as a whole. It is not at all mandatory that all this grain be in dry form. It can successfully be used at the stage of milky-wax ripeness with a well-crushed silage mass. It is important that it be there and that it find its way into feeding racks. The experience of Bashkir, Kurgan, Ryazan and many other grain farmers confirms the high level of effectiveness of such feed. This is where our real possibilities lie and they are being used extremely poorly. The land, our basic treasure, is being used inefficiently.

There is no need to underscore the fact that biological potential must be utilized maximally in all other agricultural crops as well. Properly-organized seed farming and the rapid introduction of new varieties of grain crops each year alone can provide an additional million tons of grain. At the same time we know that tens of millions of hectares of grains are being sown in non-regionalized varieties. The former ministry of grain products annually allocated hundreds of thousands of tons of seed to kolkhozes and sovkhoses. This problem too must be dealt with well by the State Commission on Food and Procurement. Things should not be allowed to follow their own course in this matter.

Second, a powerful accelerator for increasing grain production is the price mechanism. An analysis of the actual

situation shows that an effective system of measures is needed to bring out a strong interest in increasing grain production in every agricultural worker, director, specialist, lessee and all APK [Agroindustrial Complex] cadres. At the present time there is no deep economic basis for procurement prices for farming and livestock products and in particular for grain, meat and milk. A conflict arises between grain production and procurement on the one hand and the sale of meat and milk on the other.

In the press directors and economists have often expressed their conclusions and calculations about the high prices for industrial products, their lack of correspondence to growth in labor productivity and the low quality of agricultural machinery. Everyone recognizes this. Still USSR Gosplan and Goskomtsen [State price commission] have not yet worked out the measures that would be economically advantageous for expanding grain production.

Prices have not been worked through in the agroindustrial complex either. Existing procurement prices with supplements for livestock products are not equivalent to prices for grain, which it is several times more advantageous to feed to livestock in order to sell livestock products than it is to sell to the state. It is no accident that kolkhozes and sovkhoses try to sell as little grain as possible to the state, often exhibiting dependence in this in that they try to receive grain from state resources.

The situation involving the cultivation of millet and buckwheat also attests to the absence of an economic interest for increasing grain production. How many resolutions have been passed, how many exhortations and orders, yet production is growing extremely slowly; there are no groats, especially buckwheat, in trade. There is a great shortage of buckwheat groats. This means that the economic mechanism that has been developed for increasing the production of groats crops is not working. It must be redeveloped so that there are no limitations in the groats trade.

At the present time in kolkhozes and sovkhoses the share of grain production in profits, as emphasized by Ye. S. Stroyev, secretary of the CPSU Central Committee, comprises only 14.6 percent, and in one-fourth of enterprises grain production is unprofitable. Nothing other than an unthought-out price policy led to these negative results.

Really, how can we assess such absurd, if we do not say it more strongly, approaches in which the kolkhozes and sovkhoses of the Transvolga, the Urals and other zones are paid 100-140 rubles per ton for wheat by the state depending on quality and the enterprises are forced to pay 180-200 rubles and more for unbalanced mixed feed? A question arises: Who under such conditions will sell grain to the state? After all, on the world market strong wheat costs up to 190 American dollars and 230

Canadian dollars per ton. The existing elevated state plan-order is also not an accelerator but a hindrance to production.

There is only one conclusion to be drawn—to increase procurement prices for grain, especially for strong and durum wheat, groats crops, peas, soybeans and barley twofold or threefold so that the directors of enterprises do everything themselves, without any administrative pressure, to increase grain production and to increase its sale to the state. It is essential to increase procurement prices beginning in 1990. Not a single year must be lost.

Here is another thing. Since each year we spend enormous hard currency assets to procure grain abroad we must boldly move to pay for a significant portion of the procured food grain with hard currency according to prices that have developed on the world market. World prices for grain will be reported systematically in the press. This must be said now, long before spring sowing, so that directors of enterprises can estimate what this will provide the enterprise. At the same time the ministry of foreign economic relations and local agricultural organs must be obliged to conclude the corresponding contract for the acquisition abroad for hard currency of agricultural technology, machinery, equipment and other goods that enterprises will require. This must be said to them and they must do it.

It should be noted that a number of conclusions have appeared in print about the inexpediency of such a step. Here is one of them. In the newspaper IZVESTIYA of 9 December 1989 in an article "Foreign Currency Fever," E. Gonzalez poses the question: Is it logical to sell oil, timber, refrigerators, watches and machine tools abroad in order to buy grain from peasants?

And why not? After all, we are still buying grain, and lots of it. With such existing domestic prices for grain we still do not see any great zeal among kolkhozes and sovkhoses to produce more to sell to the state. On the contrary, the area in grains is being systematically reduced.

To whom is it more logical to give hard currency—to American farmers or to kolkhozes and sovkhoses? There is no doubt that this is one of the many stimuli for increasing grain production, and if kolkhozes and sovkhoses receive hard currency for grain sold to the state it will not be stashed away. Every knowledgeable director will immediately solve the problem of acquiring the latest equipment, machinery or consumer goods abroad. Will this be worse for our country?

In this way hard currency will have a twofold effect—it will be used to increase grain production and to acquire other goods. A rightful question arises: Why is there such stubborn opposition to giving the peasant an opportunity to earn hard currency? A new direction and new concepts are just beginning to be born and some publicists are trying to strangle them at their very inception. This is nothing other than perestroyka in reverse. Grain is an invaluable treasure. For this reason this measure

has a right to exist until we begin to export grain ourselves and to earn hard currency or until the ruble becomes convertible.

Undoubtedly there are many other economic stimuli. But one thing is clear—a strong economic interest, and only interest, is required. The economic mechanism must act first and foremost (emphasis mine—V. L.).

Thirdly, considering that the main regions for commodity grain production are located in unfavorable soil-climatic conditions, an especially important role is played by supplying enterprises with a full complex of the latest agricultural machinery for grain cultivation. The priority must be given to mechanization because only the most perfected, highly productive and technological machinery will help to solve the grain problem. It is right now that we must think about with what and how we will sow and harvest grain at the end of the 20th and beginning of the 21st centuries.

Of the numerous problems involving the mechanization of grain production I would like to mention only the solution to two exceedingly important problems. Above we spoke about the production of corn grain. For this it is essential to manufacture an adequate number of precision sowers such as those used by the Austrians in Kurgan and other oblasts. These sowers will enable us to achieve a precisely-assigned plant density in the field. Excessive corn density is one of the main reasons for low yields. Our industry can do this within a short period of time. We need firm state orders. This can and must be done without doubt, and not sometime but in the course of 1-2 years.

The bureau for machine building of the USSR Council of Ministers must finally decide the question of producing silage-harvesting technology. This became one of the most problematic areas in agricultural production long ago. Due to the early harvesting time for corn and poor-quality crushing, losses that amount to billions of rubles are tolerated. This truth is known to all but the problem is being dealt with very slowly. How many decisions have been made, how many seminars have been held, but the problem remains. We must say directly and openly that the government's indecisiveness is being manifested in this problem. If there is not enough energy to do everything then priorities should be established and consistently implemented. A feed-harvesting combine on the level of the world standard is priority number one.

Reproofs regarding the shortcomings and low quality of all feed-harvesting equipment are expressed in every enterprise. It is essential to supply all kolkhozes and sovkhoses with high-quality equipment in the shortest possible time. Now, when the conversion of defense industries has begun, the possibilities for this have increased many times over. Some industrial enterprises of the Transvolga and Urals could solve this honored problem in the shortest possible time. Control over the production of such machines should be established by

the government. This state order must be carried out without hesitation. As part of glasnost society must be constantly informed about the fulfillment of orders for the village.

Fourthly, a solution to the grain problem will depend to a large extent on the availability of highly competent cadres of specialists and workers and on their ability to introduce the achievements of world science into production. Already today we must train such cadres in higher educational institutions and technical schools. The professionalism of specialists must be somewhat higher than it is now. For this we need not only theoretical knowledge but also the ability to implement it. It is

essential to create management schools in the country, and to widely utilize foreign experience with the goal of having each hectare of land provide more by a factor of at least 1.5-2.

To deal with all of these tasks and a whole series of others we will need time, assets and most importantly, persistence and consistency; we cannot delay even a single day. Time is passing impetuously. Solving the grain problem in our country means solving many social problems, removing tensions and radically improving the supply of all livestock products for the population.

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POLICY, ORGANIZATION

BSSR Economic Accountability Benefits Consumers

904D0110A Moscow SOVETSKAYA TORGOVLYA in Russian 17 Apr 90 p 2

[Interview with N. A. Makayed, deputy chairman of the Belorussian SSR Council of Ministers, by correspondent A. Suslov: "Kozraschet [economic accountability] and Commerce"]

[Text]

[Suslov] As is well known, the Belorussian SSR converted to regional economic accountability as of 1 January 1990. What changes in supplying the population with consumer goods have occurred since then? What sort of a republic consumer market is there today?

[Makayed] I can't say that it is a saturated one. Even now many goods continue to be in short supply. However, I don't agree with those who say that the shelves in the stores are empty. There's no need to dramatize the situation. In the food stores of Minsk, and even in other of our republic's industrial centers, there almost always is beef, pork less often, and sausage products also are being sold. We sell dairy products, culinary items and convenience foods regularly. With respect to growth rates for non-food products, the republic has reached the goals envisaged by the comprehensive program for the end of the five-year plan. The growth in the output of goods by 1990 was planned to be more than 2.5 billion rubles' worth; the average annual increase actually achieved during the preceeding years of the five-year plan has been 1.1 billion rubles. We are giving special attention to the delivery of goods not in value but in physical terms. The statistical data indicate that during the first two months of this year the output of consumers goods has grown by 6.5 percent as compared to the corresponding period of last year.

[Suslov] However, household appliances, building materials and shoes are still in short supply. Furniture, television sets, refrigerators, sewing and washing machines are sold on the basis of advance orders. How can one have done with this shortage?

[Makayed] A difficult question. Nevertheless I shall attempt to explain something. Even in previous years the republic's Council of Ministers carried on goal-directed work to increase the output of consumer goods. All industrial enterprises, regardless of their departmental subordination, were orientated to the solution of this problem. A standard amount (normativ) for the production of consumer goods per ruble of wages paid by an enterprise has been introduced in the republic. According to the results of work at non-specialized enterprises of all-union subordination during 1989, this indicator has reached 88 kopecks and exceeded 1 ruble at enterprises in Vitebsk and Grodno oblasts. We hope to come out with such an indicator for the republic as a

whole at the end of this year. As a result the consumer market, one can consider, is saturated today with "trifles" produced locally. You can't at all call our stores empty, although it does happen, of course, that you don't find a particular thing you need.

This year not less than 50 percent of the increase of the production of goods achieved in comparison with 1989 is to remain for sale to the population and their above-plan output is to fully remain. The entire increase will remain beginning in 1991. And this means that, at the existing rates of growth, we will receive additional commodity resources worth 2-2.5 billion rubles.

However, these are, so to speak, theoretical calculations. Experience indicates that it is always harder for us to put our demands into practice. Citing the Law on the State Enterprise, producers, without asking anyone, take out of production unprofitable items that the public, however, needs. And the fact is that someone should still produce them! It seems that changes need to be made in the law which would take into account the interests of the customer. The law should "work" for a person, to meet the needs of the consumer, and not just for the interests of the narrow circle of people who represent the collective of a particular enterprise.

[Suslov] The law has been adopted however. Although the draft law entitled "On the Socialist Enterprise" now being discussed by the deputies in the Kremlin possibly will change the situation which has arisen. However, be that as it may, under conditions of the development of a free market, industry is beginning to dictate its own terms and administrative measures will hardly help here. In your view what should be undertaken to countervail the market's lack of balance? How to make it so that the market works for a person and so that the traders who have been slumbering till now wake up?

[Makayed] You're right. At the present stage our commercial activity has still not received sufficient development, because in a rigidly planned economy trade pins its basic hopes on the centralized receipt of funded commodities. Production plans were sent down to an industry "from above." Under these plans it was poorly provided with raw material through Gossnab [State Committee for Material and Technical Supply] and the output obtained was distributed, through Gosplan [State Planning Committee], by regions, where it was sold to the customer.

Trade stereotypes are long-lived. Many of our cadres have been relying on centralized funds up to this point and are rather afraid of the free market. Nevertheless the first commercial steps are already being taken. Under economic accountability we have had, it must be admitted, considerable opportunities for manipulating goods. An "awkward situation" involving soap, detergents and toothpaste arose, one can say, in the republic last year. They sent one of the traders from Minsk for these goods—where would you think? To China! They supplied him with the necessary powers and earmarked

goods for sale. And what happened? Half a year has passed and now there are up to 10-12 types of toothpaste in our stores which we deal in freely. The specialists calculate that in the second half of the year, apparently, we will convert to the regular sale of synthetic detergents. These goods were obtained not only from China but also from a number of other countries as well as from all-union sources.

[Suslov] But is what is acquired always equivalent to what is sold? Won't we be the loser here? Our traders don't know world prices very well and we can have losses.

[Makayed] I don't think so. In the first place specialists—skillful, competent people—make the commercial deals. Secondly, before every trip abroad they get skilled advice in Belorusintorg [Belorussian Foreign Trade Organization] under the Belorussian Council of Ministers. Thirdly, one cannot trade without risk. If we don't trade we're never going to learn anything. What is more we have reached the point where similar commercial transactions have been concluded not only on behalf of the republic or a city but also by individual trading organizations and large trading enterprises. And I will say that as a rule this is being done with benefit to the customer and also for trade, of course, as well.

I will cite an example. Last year the Minsk GUM purchased various goods worth 5.9 million rubles in Poland. This included more than a million rubles' worth of shoes and ready-made garments and knitted wear worth a similar amount. Rags and certain sufficiently available household and cultural goods were sold there. The economic effect from this transaction was 2,400,000 rubles. So that our business people also know what is what.

[Suslov] But there are few such examples apparently?

[Makayed] Why? Specialists of other large enterprises are also engaged in commercial activity and rather successfully so. Last year the Minsk Belarus department store acquired eight million rubles' worth of goods that the population needed through barter operations abroad. Workers of Brest and Gomel department stores have concluded mutually advantageous barter deals worth large amounts. Consumer cooperatives and industrial enterprises are settling down to this work. The Minsk Silk Fabrics Combine earmarked, in particular, excess lining fabrics for the conclusion of barter deals, the Krasniy Metalist Plant—scissors, and other enterprises—foreign exchange. Workers of the oblast consumer cooperatives union went to Poland, concluded deals with the Vari-Meks, Unitra and Yedmar foreign trade firms, and bought from the Poles almost a million rubles' worth of shoes and ready-made garments which we don't have enough of on our market. Half of the goods purchased was sold to workers of the industrial enterprises which participated in the transaction and half went to the free market.

[Suslov] But such trade surely has its costs. Let's say that the Minsk Refrigerator Plant deals directly with foreign countries in refrigerators which our customer needs and the Minsk Gorizont Television Production Association in television sets which we also have a shortage of. For these goods, for which our demand is limitless, the manufacturing plants buy clothing and shoes and sell them only to their own workers. Is not such commerce a manifestation of collective egoism?

[Makayed] Yes, the free market, not being restricted by the state, leads to a surge of departmental egoism. And here, despite the Law on the State Enterprise, we are compelled to interfere: a producer should produce and trade should trade.

[Suslov] You probably read in IZVESTIYA the conversation of a correspondent with the former ambassador to Tanzania entitled "A Pineapple for the Arbat." What thoughts did this conversation provoke for you personally? Have specific plans emerged?

[Makayed] A very interesting conversation. It opens the eyes of our traders to potentialities for mutually beneficial trade that are available and not now being utilized. Unfortunately, the country's foreign trade services have monopolized the foreign economic market and are not very willing to allow even economic accountability republics to enter there. And we would sell our above-plan tractors to the selfsame Tanzania with pleasure if we knew we could buy the goods we need for them.

A few words about licenses. I think that the granting of licenses for the sale of goods abroad hampers trading entrepreneurship. Let's say that motorcycles got on that list. What is more expensive for us now when there is a goods famine: motorcycles or, for example, men's jackets? One could get 13 imported jackets in exchange for a single motorcycle. A motorcycle costs 390 rubles on our internal market, and 13 jackets—2,600. And jackets are very likely more necessary now. I think that one can make do without motorcycles for some time.

[Suslov] What, in summary, are the commercial possibilities of the republic and your plans in this direction for the near future?

[Makayed] A trader never shares his plans. It's not for nothing that there is such a concept as the commercial secret. I'm joking. But I will say in earnest that the republics simply need to grant more freedom for commercial maneuver.

In connection with the conversion of the republic to self-financing and cost recovery, we put the question to the USSR Council of Ministers of revising the existing licensing procedure. We think that this ought to be the prerogative of the local organs. It is clearer to us that one can buy and sell with advantage for a republic and that excessive centralization only hampers commerce.

Industry for the production of technically complex goods has developed in Belorussia. Meanwhile we occupy far

from the first place with respect to their being supplied to the population. Thus we have 95 television sets, 85 refrigerators, 53 washing machines and only 40.5 vacuum cleaners per 100 families whereas for the country these indicators are correspondingly equal to 105, 92, 70 and 46.4. It's time to have done with such unfairness.

We would not be able to appeal to the center with an outstretched hand if we had the possibility of independently disposing of at least a portion of the goods in constant demand that are suitable for export. However, out of the Atlant Production Association's total output of refrigerators and freezers last year of 715,000 units, 417,000 were centrally sold for export while the republic was allotted only 48,000 for the internal market.

[Suslov] It turns out that "the shoemaker's wife is the worst shod." What kind of social justice from the inter-regional point of view can this be?

[Makayed] However, one needs to consider that Belorussia was allotted 115,000 refrigerators of other brands from the other regions of the country. Such an approach is a correct one, since not every family can buy the expensive "Minsk" and there ought to be a choice in the store. We have succeeded in proving to the center that it is necessary to change the approach in providing the republic's population with technically complex goods. The commodity funds for refrigerators, washing machines and vacuum cleaners have been increased this year in comparison with last year. We expect that in the next year or two we will reach the all-union supply level.

Of course, we understand that we will not be able to meet the population's demand by imported goods. Therefore the republic's government has instructed the Belorussian Gosplan to prepare a program with respect to goods and services for the 13th five-year plan. The task has been set to ensure that the needs of the entire population of the region are fully satisfied.

Undoubtedly measures will be taken also to increase the purchase of goods through import as well as on the basis of commodity exchange operations with other regions of the country; that is to say, we will begin to more boldly make the transition to market relationships.

FOOD PROCESSING, DISTRIBUTION

People's Deputies Advocate Privatization To Solve Food Problem

904D0104A Moscow TRUD in Russian 18 Apr 90 p 1

[Article by V. Shchurov, Moscow: "How To Feed The Country?"]

[Text] The Club of People's Deputies of the USSR conducted the forum entitled "Food Goods: What Can Be Done at the Present Time and in the Future." The rights of an owner were discussed by P. Bunich, A. Veprev, V. Tikhonov, Yu. Chernichenko and N.

Kozyrev and also by such guests as: Tula farmer I. Belyuk, vice president of AKKOR V. Bashmachnikov, and chairman of the Dagestan imeni Ordzhonikidze Kolkhoz M. Chartayev. They shared the same opinion: the nation can be fed if we liberate the peasant bread-winners.

The foundation for this was established through the adoption of the Law Governing Land. The right to own land and to dispose of a harvest and income was returned to the worker. Allow me to emphasize the fact that nobody has been called upon to immediately break up the kolkhozes or to maintain the monopolism of public ownership. The speakers believed that only a varied life style is capable of overcoming the product shortages on the counters. For example, the shortage in fruit and vegetables that has already set one's teeth on edge.

A. Veprev, chairman of the Agrarian Committee of the USSR Supreme Soviet: I consider this to be an artificially created problem. It can be solved during one season if a tract of land is granted to each person desiring same in the cities and settlements. And it should be given to them close at hand and not at the end of the world. A circle should be drawn on a map using a compass, and the land so encompassed given to the people. In the hands of "private operators," such land will be utilized 12-13 times more effectively than on a public farm.

Here there is no argument. It is known that a large portion of the potatoes and the lion's share of the vegetables and fruit are supplied to the counters by "small" gardens. At the same time, in the nonchernozem zone alone, many thousands of hectares of agricultural land have become overgrown with weeds and dense undergrowth. Common sense and cost accounting demand that there be no slowdown in ensuring that plots of land are made available for those desiring them. But not every individual who submits an application to a trade committee for a garden tract has to wait long years. The restrictions have already been removed and yet the local authorities are still displaying concern for ensuring that nobody becomes rich on a "private plot."

Moreover, we have in mind here not only the garden trade. Peasant farms have already appeared in various regions of the country. However, the problem derives from the fact that the Law Governing Land assigned the right to possess the latter to kolkhozes and sovkhozes, to which practically all of the land belongs today. How is it possible under such conditions to carry out a land reallocation?

Yu. Chernichenko, journalist: a reserve of land must be created in all of the regions. Fields which furnish fewer products than the average oblast level must be alienated and removed. Regardless of the extent to which we equip the kolkhozes, they are not feeding us, since it is impossible to fill a bottomless pail. It is another matter entirely if we turn over one half of the land to farmers and cooperatives.

V. Bashmachnikov: We are striving to revive peasant private ownership of the means of production. But these attempts are being given a hostile reception. Indeed, here we have in mind neither more nor less than a redistribution of authority—a worker invested with the power for management using his own mind, not to mention being able to issue orders.

Incidentally, the editorial mail has contained many letters from oppressed and offended farmers and leaseholders. In the arsenal of zealous administrators, there are more than enough methods for controlling them. Let us assume that it is possible to request an exorbitant payment for land, since the mechanism for collecting it has still not been defined. A contract can be employed for ensuring that the products grown are turned over to a kolkhoz and later they can be resold to the state with a mark-up of triple the price. It is also possible to refuse the land.

I. Belyuk: In the Novomoskovskoye APO [agro-industrial association], they experimented with me for a year's time as though I was a guinea pig. I received a loan, I purchased a farm and equipment and I undertook to take care of more than 1,000 head of sheep. But when it came time to allocate the land, the administration of the Pravda Kolkhoz firmly rejected the plan. They strived to attain their own ends and in revenge they imposed the following upon us: not another kopeck was given to the financial-accounting center and no livestock were delivered to the meat combine. We sit without land and without feed, the sheep breathe and nobody profits!

The troubles of a farmer began when the decision was made as to whether or not he was to administer a farm. At this time, the offices subdued the wishes of many to farm independently. Today the right to solve this question has been turned over to the local soviets, which were chosen in a democratic manner. It is hoped that the deputy committees, during such redistribution, will be guided not by kolkhoz-sovkhoz but rather by state interests.

In the process, it should be borne in mind that differences exist from one farm to another. This same Krasnoyarsk Nazarovskiy Sovkhoz was headed for many years by A. Veprev and every year it produced almost twice as much grain per worker than the average figure for the country. Yet the earnings of the local grain growers were less than that at other farms. Wage levelling, which has been condemned repeatedly, continues to treat the strong and the weak at the same level—through a system of subsidies and voluntary-compulsory state orders.

A. Veprev: We who serve on the agrarian committee favor giving kolkhoz members the right to trade their products freely both on the domestic and international markets. We will obtain currency—we will purchase the best technologies, tractors and combines. At the same time, we will force machine building to reorganize and we will break our partners of the habit of inflating prices. It bears mentioning that in the case of any other apportionment, the anti-monopoly law will simply be a fiction.

N. Kozyrev, a teacher: This is possible if we normalize monetary circulation. Today it is impossible to proceed in the absence of a state order, since our money has depreciated: nothing can be purchased with it. The state has been forced to employ a "natural tax," supplying machines and materials in return for payments in kind. Without this a city would exist on hunger rations.

What is to be done? A state order paralyzes market relationships and yet we cannot live without it. Last year the Baltic republics and Moldavia did not meet their delivery quotas for the union fund and many oblasts in the nonchernozem zone and the Ukraine reduced sharply their grain sales despite having obtained fine harvests.

It is obvious that this type of problem is inevitable—the directive methods are already obsolete and no economic stimuli have as yet been found. The question to be asked is how can we overcome more rapidly the collapse in contractual discipline?

V. Tikhonov, VASKhNIL academician: The longer we postpone the land reform and the campaign against the kolkhoz-sovkhoz monopoly, the more extensive will be the period of depression. International practice has shown that small and average size farms are most effective. We must break up our "giants." It is my belief that a kolkhoz in the nonchernozem zone should not have more than 1,500 hectares of land.

V. Vashmachnikov: Yes, a peasant family farm is the best variant. But a farmer will not be our principal breadwinner in future years. A tremendous potential, one oriented towards large-scale production, has been created. Thought must be given to exactly how, given these conditions, it is possible to revive peasant ownership. One possible method—transforming a kolkhoz or sovkhoz into an association of independent cooperatives.

It was two years ago that such an experiment in perestroika was discussed in our newspaper. At the time, in Karymskiy Rayon in the Trans-Baykal region, brigades and teams were employed for creating hundreds of small cooperatives, all of which took possession of farms, equipment and land. Owners were found for land which was formerly publicly owned, working hands were made available for developing the social sphere and rural construction plans were placed in operation.

M. Chartayev: Yet we followed another path. We distributed the property of a farm among the kolkhoz members. The "share" due an individual was indicated on a list opposite his name. He earns dividends which are based upon income. For six years now, one person has served as both owner and worker.

In all probability, other methods are also available. But in order to find them, we must first develop a land reform mechanism. Only if this condition is met will a peasant realize his legal right to select the rural way of life. Great importance is not necessarily attached to the form that an owner takes—be he a farmer, kolkhoz member or gardener. What is important though is that he is on our land.

CIVIL AVIATION

Aviation Industry Delegation Visits U. S.

904H0258A Moscow IZVESTIYA in Russian 11 Jul 90
Morning Edition p 5

[Interview with A. Gerashchenko, first deputy minister of the aviation industry, and A. Batkov, chief of a ministry main administration, by IZVESTIYA special correspondent V. Belikov: "Aerospace America—A Partner of the Ministry of the Aviation Industry"]

[Text] Oklahoma City - Moscow—The most important group of specialists from the USSR Ministry of the Aviation Industry in recent years has returned from a trip to the United States, where they familiarized themselves with the country's leading aerospace companies. An IZVESTIYA correspondent asked the head of the delegation, A. Gerashchenko, first deputy minister of the aviation industry, and A. Batkov, chief of one of the main administrations, to tell us about their meetings and business negotiations abroad.

The capital of the Boeing company—Everett, on the Pacific coast, and the Will Rogers Air Force Base in the center of the prairie, the combat helicopter production facility in California that was "closed" until recently to Soviet visitors, and the aviation technical center of the Pompano firm in Florida... The Soviet delegation's 2-week visit in America was notable for the geographic range of the trip, the diversity of the meetings and contacts, and the openness of the discussion of scientific, technical, and production problems with the American scientists, designers, and businessmen.

A. Gerashchenko: The attitude shown toward us by representatives of the highest echelons of management of the firms and companies has decidedly changed. Instead of the previous guarded attitude and the familiar distrust and chilly reserve, they have come to perceive the Soviet people as their potential business partners, whom they need to take into account and conduct all negotiations with as equals. The Americans' first acquaintance with the superheavy An-225 "Mriya" transport and the Su-27 fighter-interceptors, which flew to the United States at the same time as our delegation, attested to the benefit of such an approach toward Soviet aircraft manufacturing.

Just a year ago, at the Paris aircraft exhibition, considerable efforts were required from both sides for a simple exchange of views with the representatives of Hughes Aircraft, which is a leading manufacturer of helicopters for the army, by the way. But now, at our first request, we were invited to the firm's Los Angeles headquarters, where its vice-presidents familiarized us with the firm's activity for several hours.

The persons we spoke with at Hughes Aircraft did not conceal their commercial interest. We had detailed discussions on the joint development of prospective air traffic control systems in the USSR and new types of flight simulators, as well as the possibility of installing

American gas turbine engines on the new Soviet Ka-126 helicopter with subsequent service maintenance throughout the world through the firm's technical centers network. The proposal is very tempting and mutually advantageous, and makes it possible to quickly move the prospective helicopter into the export markets of many countries, including the United States itself. Especially as the demand is high everywhere for small, maneuverable "all-purpose" aircraft.

A. Batkov: The entire aviation world is engaged in a lively discussion about the prospects for developing new-generation supersonic passenger aircraft, taking into account that the Soviet Tu-144 and the Anglo-French Concorde were the leaders. There is still a real demand for such a supersonic aircraft now, and it will become even more acute with the expansion of global ties in the forthcoming decade. Judge for yourself—it is necessary to spend about a day and a half in the air, as a minimum, for us to get from Moscow to New York or Washington and back. A long and tiring trip!

The day we spent at one of Boeing's gigantic aircraft manufacturing complexes was mainly devoted to mutual acquaintance with each other and a comparison of approaches to resolve the problems of developing a new supersonic aircraft. It turned out that our analyses of a possible configuration and the technical and ecological features of the future aircraft coincide to a large extent with those of the Americans or are very close to them. This should be a 300-seat airliner with a cruising speed of 2 to 2.4 times the speed of sound which has no greater effect on the environment than any mainline aircraft now in operation.

The development of an aircraft capable of "bending around" one-quarter of the globe in three or four hours with good economy is an extremely complicated undertaking, and it is too difficult for one country. The project probably will become an international one, and Soviet scientists and designers will take part in implementing it together with Boeing. Apart from this, the firm's managers expressed the desire to become involved in the near future in developing, together with the OKB [Experimental Design Bureau] imeni Tupolev, a subsonic aircraft which operates with new types of fuel.

I should also mention the visit to the prominent Collins instrument building firm, where they demonstrated the latest cockpit layout with flat display screens on the panel in front of the crew instead of the cumbersome and heavy color cathode-ray tubes. Aside from the fact that the weight is one-third to one-fourth as much, the flat screens are significantly more reliable, which is extremely important in monitoring the aircraft systems. Collins will begin developing the new equipment together with the Ramenskoye KB [Design Bureau].

A. Gerashchenko: We did not see any really perceptible results of the conversion of military production in American aircraft manufacturing. But this does not mean that the persons we spoke with are not apprehensive about

the prospect of a cutback in appropriations for combat equipment. Boeing, for example, has orders for civil aircraft up to 1996, but its managers would like to know today what the firm can expect in 10 years. We also heard something similar at Hughes Aircraft, although not one scientific research or experimental design program has been canceled in the U. S. aerospace industry.

However, the winds of change toward peace have affected even corporations such as General Dynamics and Rockwell International, which have traditionally been oriented toward the production of military equipment and have been the unseen rivals of our design bureaus in developing the latest models of combat aircraft for many years. For example, the Su-27 is considered the "answer" to the American F-15, and the Tu-160 bomber is regarded as a combat aircraft on a par with Rockwell's B-1B.

At an air review in Oklahoma City, Soviet and American fighters took off one after the other to demonstrate their speed and maneuverability and the skill of their pilots before hundreds of thousands of spectators. An invitation later from the Americans to visit and examine the B-1B bomber was a distinct acknowledgment of the complete success of the Soviet school of aircraft manufacturing.

Our colleagues from General Dynamics and Rockwell stated frankly that they are actively engaged in modernizing their aircraft, taking into account what they have seen and learned recently about similar Soviet aircraft. This openness attests primarily to the fact that they no longer perceive us just from the standpoint of open opposition and obvious rivalry in the air and on the ground. The inclination to avoid the sudden, unforeseen appearance of some new type of air weapon capable of disrupting the parity that exists is clearing the way more and more forcefully. Some of the persons we spoke with even made cautious suggestions on the possibility of jointly developing future models of military aircraft.

Unaccustomed as we are to such an idea at present, I can point out that it is far from startling. Last year, Soviet specialists were invited with full rights as participants to an international conference in Great Britain where the concept of a prospective combat helicopter for the 1990's was discussed in detail...

A. Batkov: In concluding our discussion on the results of our recent trip over the ocean, we can note the mutual aspiration by our side and the American side to move forward from general discussions about the desire for partnership and cooperation to quite specific business arrangements between firms, design collectives, and manufacturing plants. The first hopeful steps have been taken by both sides.

The next stage will be this fall, when a meeting is planned to discuss the possibilities of utilizing the latest technologies developed with the "Buran" spaceship and military equipment for peaceful purposes.

New Tu-334 Aircraft Highlighted

904H0240A Moscow VOZDUSHNYY TRANSPORT in Russian 19 Jun 90 p 2

[Report by VOZDUSHNYY TRANSPORT correspondent V. Dubovoy: "It Is Hot on the Tupolev Embankment"]

[Text] Moscow—The approval of a mockup of a future aircraft is always an occasion. The many thousands of persons in aircraft development collectives and aviation detachments wait for it. But most importantly, passengers wait for it. But the mockup is in wood at present—this is only the first stage on the way to the production line, one of the most difficult and important ones. Specialists are discussing the merits and drawbacks of the engine, the cockpit, the passenger cabin... The quality of the future airliner depends on how the representatives of civil aviation and the Ministry of the Aviation Industry coordinate their actions.

They understand this well at the Experimental Design Bureau imeni Tupolev. This time the world-renowned firm has presented the Tu-334 aircraft, which is to replace the Tu-134, for examination.

The mockup room still holds traces of the birth of its predecessor, the Tu-204. This aircraft is already being prepared for series production. But the new model? It is a development of it to some extent.

"We have retained the aircraft systems and equipment or parts of it that are interchangeable quite deliberately," says A. Tupolev, the general designer.

So two D-436T turbojet engines with a thrust of 7,500 kilograms per centimeter have been installed on the Tu-334, which gives it the opportunity to reach a speed of 800 kilometers per hour. The developers believe it will be possible later on to install a D-227 propfan engine with a pusher propeller instead of a gas turbine engine. The advantages are obvious: it is more economical, and the aircraft can fly for longer distances with such an engine. If the range is 2,000 kilometers with a gas turbine engine, let us say, the range of an engine with a propeller would be 3,500 kilometers.

It is probably too early to cite the final tactical and technical figures, inasmuch as the Tu-334 is still a mockup, but the developers are confident that the new aircraft will not be inferior to such widely-used models as the Boeing 737, the Fokker 100, and others. A feature of the Tu-334 with a fan engine is that the takeoff mass is 6 tons more than its "brother" with a jet engine. It is a completely natural question: why not install the D-227 right away? It turns out that the turbojet engine has already been tried out on the Tu-204, but the D-227 is still in the stage of being manufactured.

The fuel consumption of the Tu-334's engine is much lower than the engine used on the Tu-134. But the ICAO

[International Civil Aviation Organization] strongly recommends that the fuel parameter be considered basic. This fact is very important, since ecological problems are particularly critical today.

But let us provide a few more details, anyway. There is a fine point here. The Tu-334 is being compared with Soviet and foreign aircraft that are already flying. How correct is this? At best, the aircraft with the D-436T engine will make its appearance in 1993, but one with the D-227 will arrive only by the year 2000. But after all, the competitors are also being improved. So by the time the Tu-334 comes out on the air routes, won't it have been modified substantially, first of all, and secondly, won't it lag behind similar aircraft with its promised features?

One more aspect—comfort. This concept is difficult to fit in with our reality somehow. However, the designers believe that this is one of the main advantages of the Tu-334. It is expressed in the many variations of the cabin. Three versions have been designed: tourist, first-class, and business, none of the features of which are inferior to those of foreign aircraft. For example, the distance from the head to the back of the next seat is 20 to 50 millimeters more than on the Boeing 737 and 100 millimeters more than on the Fokker 100. This proved to be possible because the cabin floor was lowered by 200 millimeters. In addition, the volume of the baggage compartment, which is right here in the cabin and neatly screened off by a door, has been increased.

With a length of 18 meters, the aircraft is still four meters shorter than similar foreign aircraft. If you think that a gain was achieved to the detriment of the aircraft's aerodynamics, you are mistaken. It has not suffered. But then, the aircraft has a new-generation wing and a newly designed vertical tail, engine nacelles, and so forth. Incidentally, this is the basic indicator which characterizes an aircraft's level of refinement. Unfortunately, the same cannot be said of the cockpit, which duplicates the one on the Tu-204. Although there are a lot of innovations here, too. First of all, it is designed for two pilots, not for three, and secondly, the on-board electronics make use of a computer. The traditional instrument panels are absent. All information is put on a display screen. The control surface is horn-balanced. Radio communications and navigation equipment have a triple backup. Well, what about its drawbacks? They exist as well: some of the integrated circuits deviate from world standards, and there is no strategy for maintenance and operation.

When the conversation turned to the crew's interaction with the on-board computers, this led to animation on both sides. No one knows yet how to divide the pilots' workloads. Some 500,000 rubles have been allocated for this purpose for Ministry of Civil Aviation and Ministry of the Aviation Industry specialists to study the crew's interaction with the computer.

As certain members of the Ministry of Civil Aviation commission confirm, the paragraph "number in crew" in the specifications for the aircraft states that it has a crew of three, but the designers developed an aircraft for two pilots. So how many are there?

"In my opinion, Aeroflot is making a mistake by planning on three crew members," said Yu. Kashtanov, deputy general designer of the OKB [Experimental Design Bureau] imeni Tupolev. "The trend in world practice is to have a crew of two pilots."

Indeed, Aeroflot's position is incomprehensible.

We are not citing the many other comments made in the meetings in this brief report. I think the specialists will have time to consider everything. But it is already clear now that the new aircraft has both merits and drawbacks. However, what do the Tupolev employees themselves think?

They believe that Aeroflot will buy the aircraft, as before. It has no other choice, they say. Indeed, we have one Ministry of the Aviation Industry. And one manufacturer. But times are changing. And the purchase of the A310's is an example of that. And it cannot be helped here. But what is the position on this of the Mockup Commission chairman?

"We are not drawing any conclusions yet," says A. Aksenov, chairman of the Mockup Commission and deputy minister of civil aviation. Before putting on the final signature, we have to study the new aircraft by sections. We want to buy it, not receive it. The order will be placed only after a comprehensive analysis. And if this takes place, series production will begin tentatively in 1993."

Unfortunately, later times have not been ruled out, either. Let us recall the Ministry of Civil Aviation's promises to put the Tu-204 and Il-96 on domestic routes in 1990. It is apparent to everyone that the promises have not been kept. And later...

As VOZDUSHNYY TRANSPORT has already reported, the "Skorost" Association will be developing, producing, and operating the short-range mainline Yak-42M airliner in the near future. At the same time, the Balabuyev firm today is offering the short-range An-180 mainline passenger aircraft, which is no worse, and in some features even better, than the Tu-334 which is being developed. Can the expansion of one type's modifications be justified?

The arguments arise and subside at the plenary sessions. It is possible that passions would flare up if the representatives of aviation enterprises were present: the engineers, ground service personnel, and economists, and the pilots first of all. The assessment by the Ministry of Civil Aviation commission is being made with an average yardstick, if we can express it that way. What does this mean? This refers to the operating conditions that can be expected. Consequently, not only the opinion of ministry

experts, but the immediate users, should be taken into account. It must be said that foreign firms always take into consideration the opinion of the potential operators. But why don't we have them in our case? VOZ-DUSHNYY TRANSPORT has received a considerable number of letters from pilots who would like to be present for such measures. This would make it possible to resolve matters relating to operation of the aircraft, its modernization, and improvement of its efficiency in the shortest time possible. It would be possible to resolve problems on the spot with the developers and manufacturers.

So the new Tu-334 aircraft has appeared on the horizon following the Tu-204, and the Tu-304 is already on its approach. Will the Tupolev Embankment justify our hopes?

RAIL SYSTEMS

Rail Transport Management Structure Questioned

904H0218A Moscow GUDOK in Russian 6 Jun 90 p 2

[Article by Ye. Ayzenberg, head of the "Economics of Transport" Department of the RIIZhT [Rostov-on-Don Institute of Railroad Transport Engineers] and doctor of economic sciences: "Transport Is Tired of Waiting for Changes"]

[Text] Rostov-on-Don—In responding to the article by A. Vaygel, chief of the Ministry of Railways Organizational Structures Improvement Department, entitled "Reorganization Is Not an End in Itself" (GUDOK, 20 April 1990), which essentially reflects the viewpoint of the ministry on restructuring the system for economic management of the sector, the indisputability of the author's thesis that reorganization is not an end in itself should be emphasized. Unfortunately, the practice of recent years, when numerous changes were made in the organizational structure at all levels of the sector's management, contradicts this assertion.

Taking the list of questions suggested by A. Vaygel, which he asserts the ministry is prepared to use as a basis for a constructive dialogue with opponents of the current system of transport management, let us try to respond to them in the order in which they were raised in the article cited.

Question: What are the shortcomings of the existing system of management or the economic mechanism?

Answer: These are the same shortcomings exhibited by the administrative-command system of management. The principal ones are:

- the inflexible nature of the production-economic decisions of higher units, which are devoid of alternatives and are not coordinated with those directly engaged in performing the work;

- the higher units' lack of responsibility to lower units for the management decisions made;

- higher management units' disregard for the interests of those directly engaged in performing the work;

- suppression of labor collectives' economic initiative, wage-leveling, and social injustice;

- the cumbersome nature of the management system and the excessive number of units in it, and its inability to react promptly to changes in the production situation in the network, in spite of the apparent extensive technical potentialities for centralized day-to-day regulation of the sector's work;

- The existing management system's lack of receptiveness to different kinds of innovations; and

- suppression by pressure and administrative-command methods of economic relationships in the sector. This has been reflected in the lack of development of cost accounting at lower levels, the lack of cost accounting independence in line enterprises, restriction of railroads' and divisions' production-economic independence, the absence of intrasectorial horizontal and vertical contract relationships, and a great deal more.

Question: What changes must be introduced in the management mechanism to compel it to operate in the new way?

Answer: We need to shift the sector to economic methods of management "from top to bottom." Which means the following in practice: the line enterprises (locomotive and railcar depots, track subdivisions, signals and communications, power supply, and so forth) receive the status of independence in conformity with the Law of the USSR on the Socialist Enterprise.

Consequently, it is time to reject the questionable theorization in A. Vaygel's recent article that line enterprises do not turn out an end product and cannot be accorded such status for this reason. In reality, the situation is quite the opposite. It is essential to recognize at last that the line enterprises are providing services in the form of technical transport facilities in good working order which make the transportation process possible. The consumers (the traffic subunits) should pay for these services at appropriate prices. All this is fundamental for normal cost accounting, but lack of understanding or denial jeopardizes the establishment of economic relationships in the sector.

We also need to develop intrasectorial horizontal and vertical contract relationships, as well as outside economic ties not only with the owners of goods, but with those who supply the transport equipment, fuel, materials, power, and other means of production. Unless such relationships are organized, normal functioning of the sector in market economy conditions will become impossible, even if rail transport is transferred to the state sector of the economy.

Different kinds of railroad transport production associations (divisions, railroads, sectorial production and scientific production associations, engineering centers, and the like) can be established on the basis of independent state line enterprises. Small but skilled management staffs, to be maintained for the associations with enterprises' funds, should perform only those functions which are delegated to them by the labor collectives.

However, this does not mean that the existing organizational structure should be changed immediately. Moreover, restructuring it at the present time, which is a difficult one for railroad transport, may lead to negative results, in my view. In this case, it means restructuring the system of production-economic relationships based on economic management methods within and among the existing organizational structures.

With such an approach, the railroad divisions, against which many line enterprise and structural unit labor collectives have expressed resentment lately because they consider them to blame for wage-leveling, injustice, and suppression of economic initiative, could become the enterprises' helpers and partners in organizing the transportation process in a region, in capital construction, in material and technical supply, in repairing and maintaining available housing and production and social facilities, and in organizing work supply, environmental protection activity, and the like.

It also has to be taken into account that under the existing management system, the divisions and railroads are under higher management units as well, in the same inequitable situation as the line enterprises are with respect to a division.

The role and functions of the Ministry of Railway services, as well as its production administrations, will be changed under the new economic management conditions, obviously. To all appearances, they will be providing services on a cost accounting basis associated with the scientific and technical development and overall laboratory and technical equipment of enterprises and associations.

The system of making decisions will be changed—it will become collective. At the same time, their implementation, taking the specific nature of transport into account, will require one-man management and personal responsibility. The establishment of boards of directors of enterprises and organizations which are part of the associations and the managers of associations (railroads, divisions, production associations, and so forth) who are assigned by the Ministry of Railways or who represent it meet the requirements of such an arrangement best, in my view. Accordingly, the collegium of the Ministry of Railways should not be made up of the highest officials in the ministry, but the chiefs of railroads and the directors of All-Union production and scientific production associations.

Question: What are the results expected from the reorganization?

Answer: The system for management of the sector being proposed will make it possible reduce the number of management personnel by roughly one-half.

However, the principal result of the shift to economic management methods will be the release of labor collectives' creative initiative from the paralyzing effect of the administrative-command system of management.

Military Construction Units Withdraw from BAM Railway Zone

904H0211A Moscow *RABOCHAYA TRIBUNA* in Russian 23 May 90 p 2

[Article by N. Belyy: "Landscape After the Battle: Abandoning the BAM, Military Construction Personnel Left Behind Burnt Sites and Twisted Equipment"]

[Text] *The spectacle in connection with the completion of the basic work on the "construction project of the century" is over and numerous subunits of military construction personnel have started to leave the eastern sector of the main line, exchanging the BAM for Siberia. The departure, which began in September of last year, is continuing. In leaving and taking with them the awards of the Fatherland for the construction project, the military people are literally burning their bridges behind them, burning base settlements and abandoning equipment—leaving behind a truly "front" landscape to the right and left of the road that cost us so dearly.*

Do you not believe it? I did not believe it either until I came and was convinced....

My interlocutors were resolute. Sitting in the small office of the corps staff was a group of army officers no lower in rank than lieutenant colonel. I had hardly crossed the threshold of the office when I was bombarded with attacking questions:

"How long is the press going to defame us? With and without reason?"

"Do you have specific complaints about the 'Working Tribune' and my articles?"

There were none and I certainly did not want to answer for the entire press. And I myself had never had the occasion to write about the military—neither good nor bad. There just was no occasion. But here there was and what an occasion! At the *RABOCHAYA TRIBUNA* press center, concerned calls started to come in about the man-made fires at the BAM and about some incredibly consequential departure of the troops who took part in the construction. BAM, the newspaper for the whole line, which comes out in Tynda, was the first to detect the smoke from the line and to sound the alarm. A few months ago, an article appeared in it with the headline "Retreat? No, a crime!" accompanied by photographs of burnt sites and abandoned military property. The text, in particular, stated: "The civilian population sent thousands of curses after the railway soldiers who built the

settlement of Verkhnezeysk... Why? After all, about 10 military subunits, beginning with a landing force in the mid-1970's until the time of their redeployment in 1990, self-sacrificingly laid a railroad in the wild taiga. The departure of the soldiers from the shores of the Zeya was impressive: day after day and night after night one could observe the broad panorama of burnt sites in the places of the former stationing of military units. Fire destroyed everything that was, not sparing expenditures, what was built for amenities was abandoned, hundreds of units buried equipment, and even food supplies that had become burdensome were burned. The scope of the losses? Six-figure ruble amounts allocated over a decade and a half of construction from the state budget and pockets of the people...."

"This is all a lie!" objected the staff officers in despair. "If they burned things, then it was things that were worn out and of no use to anyone. We repeatedly suggested to the local authorities that they take over the settlements in their balance but they kept refusing. And as for the equipment? This nonsense about destroying it is just evil lying. We maintain strict control over it. Each unit is accounted for, believe me!"

I would have believed them if it were not for one uncontrived letter from a soldier in my pocket at the moment of my conversation with the commanding officers. (Its author is in active service but for understandable reasons I will not give his family name). Without adding or taking anything away, the lad writes home: "They wanted to sell our town 'Kipyashchiy' to the civilians for 40,000 rubles, for they wanted to make a recreation base here. The buyers did not show up on the appointed day and that evening we were ordered to set fire to everything that would burn. In short—cottages, the bathhouse, the dining hall, the staff headquarters, etc. So 'Kipyashchiy' no longer exists. When we came to the battalion, I and some other fellows wrote to the 'Vzglyad' [Viewpoint] program and not only about the fate of 'Kipyashchiy' but about a lot of other things. For example, when the battalions moved by railroad, a bulldozer passed over the cars without platforms and they then buried them in open pits. And there was much, much more. This is the kind of thing."

Is this not enough, comrade members of the military? Well, here is some more testimony of an eyewitness, whose name does not need to be concealed. Capt V. Kondratyev, deputy chief of the motor vehicle service of one of the units, reports to the garrison military procuracy. "When the unit was being disbanded in the fall of last year," he writes, "there was mismanagement and waste of motor transport assets. Many motor vehicles appeared in personal use among the local population and in local prospecting associations. They include 'ZIL-130's,' 'M-290's,' 'MAZ's,' 'UAZ's'.... It is unclear whose they are, although they are operating under military numbers. Where Almasov's battalion was, there are three 'GAZ-66,' two 'ZIL-130' and three 'ZIL-131' guarded by a civilian with a rifle...."

More? All right. Here is an official document, a telegram sent to Tynda from the directorate of the railway troops signed by Colonel General Makartsev: "We are continuing to receive legitimate complaints from the population about the barbaric attitude of our units in the transfer and abolishment of towns that we occupied in Verkhnezeysk...."

I go to the Eastern BAM to clear up the circumstances and immediate causes of this barbarism. Although it is a shame, I have to turn down the helicopter that the military people offer me, preferring the slow BAM trains. Still, it is more apparent from the ground what the soldiers built to the east of Tynda—essentially through the entire region near the Pacific Ocean. It is approximately half of the second Transsiberian to the Pacific Ocean. The BAM, by the way, was built under the principle of parity: one part for civilians and one part for the military.... They did not get the most difficult sector but this is really not the essence of the matter. I traveled along the eastern wing to Fevral'sk—sometimes in a compartment but more in the cabins of freight diesel engines for the sake of objectivity, which my staff opponents insisted upon. I must attest that much memorable work has been done. There are no longer any concentrations of military construction personnel here—the tent towns along the line for the mass of simple skilled soldiers who do not know how to destroy but to create have disappeared. And here is the result of their efforts over many years—a man-made highway of steel shimmering in the sun.

Col Nikolay Ivanovich Smirnov and I leave the car. As a representative of the corps, he wanted to travel with the RABOCHAYA TRIBUNA correspondent. He once served here and participated in the construction of the railway and therefore he has a very good idea of where things were and why they were lost. Everywhere can be seen signs of a hasty universal flight. In the outskirts of Verkhnezeysk and near the settlement stretch landscapes worthy of the once renounced "battle" for the main line. Here are empty yards with piles of twisted and burned metal, charred building frames and destroyed brick walls. A poster miraculously survives: "Soldier! Save the people's kopeck!" There is nothing to save other than perhaps the poster. It is possible that they will do some recultivation for the purpose of returning to nature what was once taken as a deposit. They will drive a bulldozer here, it will push the garbage away somewhere so people cannot see it, they will cover the former place of human habitation with a rocky soil and that is all. This is in the best case. In the worst, everything will remain the same, overgrown in a state of neglect. I also saw such settlements. Houses stand unsinged (the growing concern of people about the departure of the troops stopped the hot weather fires) but anything that was at all useful was pilfered, dismantled or removed to parts unknown. It would be fine if it were just these towns standing apart from the permanent settlements. Directly in the center of the large BAM station of Dugda stand those same ruined and ownerless former barracks premises, warehouses,

headquarters, clubs, etc., etc. No one needs them? By no means! Here in Dugda, at the very height of the departure of the military, the Amuragropromstroy Association began to build a new timber procurement establishment. There is a lack of production capacities and equipment.... They thought that there would be no delay with the establishment of a new base. After all, the military will help, for they are being cut back anyway! No, the transfer got caught up in red tape and for many months now the army town that once cost a lot of money is becoming useless and looks out of empty windows.

The equipment buried in the permafrost turned out to be a more complicated matter. A mine detector would be useful here but alas the RABOCHAYA TRIBUNA correspondents are not equipped with such a unit. Nor did the presence of a colonel from the political section help. Besides, engineering equipment would probably not hold up here because of the excessive strain on it—the land is literally filled with metal.

The machinery was not found in the ground but it was discovered on the surface. The correctness of Capt Kondratyev was affirmed by Yuriy Vasilyevich Plokhinov, chief of the Verkhnezeysk police. He gave the figure of 67. Precisely this number of motor vehicles of different makes that were formerly attached to units remained in the hands of private individuals. The atmosphere of connivance and negligence and the cocky belief that they would not prosecute victors produced a favorable soil for abuses or, more accurately, for crimes. They enlightened me about how this was done: broken-down equipment (without count) was loaded onto flatcars and good equipment went "left"—sometimes in exchange for some local moonshine. And the equipment "went away" to places far beyond the boundaries of the BAM. Take that same Dugda. A considerable volume of work here is performed by the Moldavstroy-BAM SMP (construction and installation train). The train leases from the military people equipment that it is not their property. Formally it is not but if necessary.... The senior acceptance and transfer officer for the Dugda station A.I. Meshcheryakova helped explain: she dispatched flatcars with machinery to sunny Moldavia.

So here you have "accounting and control," comrades from the staff! Here is an "untruth." And a truth that, using the language of the jurists, in its totality is quite sufficient for serious criminal "organizational conclusions."

No, I am not inclined to blame the army officials for everything that was done, so that they will not consider this report as the next attempt to undermine our highly respected army. In the final analysis, they acted as the local authority allowed. That is, Soviet authority. Military people frequently point this out and not without justification.

Indeed, what prevented them from immediately putting a stop to the unrestrained vandalism and why was the

lawlessness tolerated by those who stand guard over the interests of this remote northern land and its inhabitants?

"What do you mean we tolerated it?" asks V.S. Masenko, chairman of the Zeyskiy Rayispolkom, with a voice full of indignation. "We even wanted to arrest the commanders who ordered the destruction of property but our forces were not equal!"

"Then how is one to understand your signature of approval under the materials of the joint conference with the military that was held in Verkhnezeysk on 12 February of this year? There they decided to begin destroying the remaining buildings after 1 May if they are not utilized in the national economy. The deadline passed but the situation did not change."

"They deceived me," retorted the chairman. "But they will not get away with this. We will file criminal charges."

V.N. Velonogonov, chairman of the Amursk Oblast Council, was just as categorical:

"How can we be blamed? We fought for those towns on the line. But the military people burned them without informing us or the BAM construction directorate. All of this is chaotic. The next diversion is already under way. There is no other word I can use. The metal bridges are being taken down along the main line, on the highway. Is this really being done for the good of the north around Amursk?"

In concluding the material, as agreed, I called Procurator Gennadiy Semenovich Kulik: what is the situation today?

"It is rather complex," the procurator answered, "especially for equipment, quite a lot of which has been squandered. We ourselves cannot cope and we asked for help from above...."

Well, since the procuracy is powerless, then perhaps the appropriate administrative agencies of the railway troops or, better, the USSR Ministry of Defense itself can establish clarity. In general, it appears that it would be much more correct to examine all the circumstances of the military-transport withdrawal in the union government or to hold parliamentary hearings in the USSR Supreme Soviet. I am convinced that the self-defense reflex of the military is well developed. It is precisely for this reason that we need public discussion of the problems of conversion and public control of the actions of the esteemed defense department, of whatever nature it might be. There will be fewer rumors and conjectures. They say that the BAM was fabulously inexpensive for the country—a few tens of billions.

Still: How much of this "trifle" was spent by the military and who is responsible for the "flaming withdrawal" from such a world-renowned road?

Rail Performance Statistics Reviewed

904H0217A Moscow GUDOK in Russian 5 Jun 90 p 1

[Unattributed report based on Ministry of Railways Statistics Administration materials: "We Are Lagging Behind, But With a Profit"]

[Text] The complicated social and political situation in the country and the decline in industrial production in a number of sectors of the national economy could not help but have an effect on the work of railroad transport. Since the beginning of the year, 99.4 percent of the overall shipment plan has been fulfilled. The overall lag amounts to 10 million tons, but for freight under the state order it is 13.6 million tons, including 4.6 million tons of hard coal, 5.3 million tons of chemical and mineral fertilizers, and 3.8 million tons of lumber. Out of 14 items on the state order's products list, the only above-plan shipments were as follows: 3.1 percent above the plan for coke, 3.3 percent for paper, 9 percent for grain and remilled products, and 0.5 percent for mixed feeds.

Fifteen railroads coped with the plan. They include the Belorussian, Krasnoyarsk, North Caucasus, Central Asian, and Moscow Railroads. Of the railroads which did not fulfill the plan, the Azerbaijan, Kemerovo, Tselina, Kuybyshev, and Sverdlovsk Railroads had the most underloading.

In May, thanks to efforts by the collectives of most railroads, the shipment target was fulfilled. Some 345,000 tons of miscellaneous freight above the plan were delivered to enterprises and construction projects in the country. The plan for transporting coke, oil and petroleum products, cement, refractory materials, paper, and a number of other items was fulfilled. It should be noted that the state order was underfulfilled by 5.2 million tons, basically because hard coal and chemical and mineral fertilizers were underloaded.

The plan for local products was fulfilled with more success. As a whole, more than 5.5 million tons of them were shipped above the plan, including 4.3 million tons of construction materials, as well as a number of food products, meat, fish, salt, sugar, potatoes, and so forth.

The loading plan was fulfilled by 26 railroads in May. The Baykal-Amur Railroad lagged behind by 2 days of work, the Tselina and Kemerovo Railroads lagged behind by 1 day, and the Dnepr, West Kazakhstan, and Alma-Ata Railroads lagged behind as well. The level of use of technical transport facilities declined somewhat since the start of the year, which had a negative effect on the overall results of the sector's work and economic indicators.

The plan for the labor productivity of workers engaged in transport operations was overfulfilled by 0.9 percent. Nevertheless, labor productivity declined by 4.7 percent compared with the corresponding period last year. The production cost of transport was set 2.4 percent too high

with respect to the plan. Some 210 million rubles of above-plan profit were received in the sector as a whole.

Rail Leaders Score High Number of Accidents

904H0217B Moscow GUDOK in Russian 5 Jun 90 p 1

[Unattributed report on Ministry of Railways leaders conference: "The Causes Are the Same as Before"]

[Text] A selective conference was held at the Ministry of Railways last week.

The chief of the Traffic Safety Main Administration, Deputy Minister G. Kozlov, characterized the situation that has developed in the locomotives administrations over the past 5 months as extremely unsatisfactory. Among the principal reasons for the frequent accidents, he mentioned in particular the failure to obey an inhibiting signal and doors dropping from freight cars (22,000 of them were lost last year alone!), as well as malfunctioning signal devices.

Deputy Minister B. Nikiforov leveled sharp and impartial criticism at managers of the Transcaucasian, Azerbaijan, North Caucasus, and other railroads' locomotives administrations. It was stressed that it was precisely the managers' irresponsible and unscrupulous position and the spirit of compromise with violators of discipline which were the original cause of the accidents. Only the specific personal responsibility of each person for the sector of work with which he has been entrusted and efficient fulfillment of his immediate duties can be a guarantee of safety on the railroads.

The conference outlined a number of specific, urgent measures to be adopted by the managers of locomotives administrations, track workers, and inspection staffs to correct the situation that has taken shape.

Rail Minister Visits Khabarovsk

904H0217C Moscow GUDOK in Russian 5 Jun 90 p 1

[Report on Khabarovsk visit of Minister of Railways N. S. Konarev by GUDOK correspondent S. Ponomarev: "Realizing the Opportunities"]

[Text] Critical production, social, and personnel problems on the Far Eastern Railroad and prospects for the mainline's development were the focus of attention for USSR Minister of Railways N. S. Konarev and the officials accompanying him. They made a two-day stopover in Khabarovsk on their way to the annual conference of the Organization for Railroad Cooperation in Pyongyang.

In recent months, the work of the Far Eastern Railroad has begun to seriously hamper the movement of freight flows in an easterly direction. The line of trains that were held up stretched to Tayshet today. And this is at a time when the Baykal-Amur Mainline has assumed part of the work. One of the railroad's bottlenecks is the freight station of Khabarovsk-2. About 330 kilometers of its own sidings and dozens of kilometers of departmental

sidings are attended by the collective of dispatchers and station operators. It has modern computer hardware and displays at its disposal which makes it possible to obtain information rapidly on the distribution of trains on the tracks. However, the computer does not produce the proper result during classification yard operations.

The conversation with the minister, begun at the ETs [electric switching centralization] post, was continued later in the office of the station chief, S. Pishchatskiy.

"I sense that none of you are studying the technology in earnest," the minister concludes. "There should be a general plan in which you need to stipulate how the classification yard is to be put in order by stages, from year to year."

The next enterprise which N. S. Konarev visited was the Khabarovsk Locomotive Depot. The renowned collective, operating the diesel and electric locomotives of the 11 series, has not been experiencing better times in recent years. The depot has had a shortage of repair spaces and capacities, which is aggravated by the very critical shortage of spare parts and equipment.

In the opinion of the depot chief, V. Prikhodko, speeding up electrification of the railroad will make it possible to resolve a combination of problems right away and change over to a fleet of locomotives of the same type. But for the present it makes sense to reinforce the repair base and raise it to an advanced level by utilizing the facilities of the locomotive depot at Komsomolsk-on-Amur, where there are spaces available.

The experience of the reinforced concrete products plant of the railroad construction trust, where the minister and the officials with him visited on that same day, shows that the energetic collective is able to handle complex tasks. The enterprise was the first in the Far East to begin turning out three-ply exterior wall panels which provide good heat insulation and better comfort for apartments. The maintenance period for houses with a special anti-corrosion coating on integral elements of the building structures has been extended nearly twice as long here. After completion of the renovation which is now under way in its shops, the enterprise's capacity will be increased up to 50,000 square meters per year. The plant will shift to a more advanced series with the symbol "Kh" (Khabarovsk).

The collective has also achieved quite good results in resolving social problems. Unfortunately, the technical equipment for production and people's working conditions leave much to be desired.

Nikolay Semenovitch asked V. Chudin, the manager of the railroad construction trust, and A. Obratsov, the deputy plant manager:

"What do you think of the ministry acquiring a brick plant abroad and delivering it to you?"

"We have to think about it," responded the managers. "In principle, we are prepared to accept such an enterprise with our balance."

The minister met with representatives of the teaching staff and students of the Khabarovsk Institute of Railroad Transport Engineers. Last year this educational institution, which trains specialists for the railroads and transportation construction sites in the region, was 50 years old.

"Managers of the ministry and its main administrations and subunits are working on the problems of improving personnel training and developing the material base of transport institutes, and they will continue to work on them," N. S. Konarev said in response to notes and statements by those taking part in the meeting. "However, we also expect specific and effective assistance from VUZ scientists in renovating the railroads. It is not clear, for example, why the KhabIIZhT [Khabarovsk Institute of Railroad Transport Engineers], which has a tremendous potential of scientists and specialists at its disposal, is not making a sufficient contribution to the work of the Far Eastern Railroad."

It was revealed from further discussion that the blame is mutual—both the scientists and the railroad's managers, who often cannot come to terms on financing the most important developments and putting them into production.

After the Ministry of Railways leader returns from the OSZhD [Organization for Railroad Cooperation] conference, he will continue to familiarize himself with enterprises of the Far Eastern Railroad located in Maritime Kray and in Sakhalin. An out-of-town session of the ministry collegium will be held in Ussuriysk on the results of the trip.

Tank Mine Found Near Rails

904H0217D Moscow GUDOK in Russian 5 Jun 90 p 4

[Report by V. Nikolayev, railcar inspector: "Days on a Mine"]

[Text] Chelyabinsk—In passing under the crossover bridge of the Chelyabinsk-Glavnyy station, switch engine engineer V. Markov noticed teenagers carrying a round metal disk in their hands. He suspected something was wrong, because the teenagers were frightened and started hiding the object...

Signalman G. Astapov, who received this report, went under the bridge and discovered the hidden disk, which he took with him. Shift workers gathered in the office of the railcar supervisor, A. Fateyev, to determine the nature of the suspicious "thingumajig." They agreed that it may be a mine and they began calling the field engineers. The latter told them:

"This is a TM-57 antitank mine. Operational, with contents [nachinka]."

The railroad workers gasped: we've been sitting on a mine for days!

Now they have to answer the question: where did it come from? The competent authorities will look into it. It is no secret that trains carrying not only categorized freight, but ammunition as well, are passing through the station. Was the "little present" from one of them?

Railroad workers are demanding that things be put in order on the railroad.

Hazardous Materials Incidents Revealed

Tomsk Area

904H0242A Moscow GUDOK in Russian 27 Jun 90 p 1

[Article by GUDOK correspondent N. Domozhirov: "We Only Need to Bring a Fuse"]

[Text] Tomsk—At 0130 hours, the guard at the materials yard of a cutting tools plant smelled a strong, acrid odor. Looking around, he discovered a tank car with hydrochloric acid. A spray of the toxic liquid was coming through an opening in the metal casing and evaporating in the air.

Rescuers arrived when the alarm was sounded. They turned out to be powerless in their special suits and gas masks. The high concentration of fumes hampered the emergency operations: sealing off the hole and neutralizing the liquid pouring out in an open receptacle with soda ash, caustic, marble aggregate, and lime. At the same time, they pumped the acid into a tank car that had been written off (there turned out to be no others available).

Thanks to the overall efforts coordinated by V. Gonchar, the gorispolkom chairman who was elected recently, most of the danger was over by the end of the day.

But trouble does not walk alone, as we know. The rescuers did not have time to leave before there was another alarm: the tank car that had been filled up with hydrochloric acid the night before was also leaking... At the gorispolkom's order, they pulled it outside the city and "sent for" two new tank cars from the "Khimprom" Production Association in Kemerovo, 200 kilometers away (they brought them to Tomsk in a special train). They closed a number of kindergartens and advised the people how to protect themselves.

When I arrived in the city, the oblast newspaper KRASNOYE ZNAMYA was publishing instructions from the city sanitary and epidemiological station prohibiting swimming in the Tomi River because of the water's unsatisfactory chemical and bacteriological readings: the concentration of phenol was up to 56 PDK [maximum permissible concentration] in individual cases and the level of pollution from petroleum products was high. The

hydrochloric acid leak had upset the people, who were alarmed by the ecological problems which had become more frequent.

S. Nikitenko, the director of the cutting tools plant, refused to discuss the matter with a correspondent under the pretext that we had not arranged for the meeting in advance, he said (as if emergency situations could be foreseen). But his deputy A. Ivanov, who volunteered to comment on the accident, had only been in this position for two months and was not fully informed about the state of affairs in general. Nevertheless, we managed to look into the reasons for what had happened.

Very alarming things were learned. In particular, the enterprise does not have an underground storage bunker with reliable insulation or even instructions for keeping hydrochloric acid in large quantities. It is stored in tanks that were written off about 20 years ago, which is hazardous in itself. They have now received railroad tank cars for temporary use. But who will allow them to be used continuously as warehouses on wheels? G. Savko, the chief of the Tomsk Subdivision of the Kemerovo Railroad, is already in a hurry to have the cars returned, and the chemical workers are waiting for this too.

In A. Ivanov's opinion, a capital investment of about five million rubles will be needed to build an underground storage outside the city. After all, aside from the special vaults, a railroad spur line, engineering supply lines, and facilities for maintenance personnel are needed. But this is a cost accounting enterprise, and it is not very much inclined to cast rubles "aside."

So can't a storage area be built on a shared basis with other enterprises whose position is no better? The city, which is being built up rapidly, "swallowed up" many warehouses and storage areas for hazardous substances in the course of time: the GSM [fuels and lubricants] storage area and the gas distribution station, for example. The rail lines to them run through densely populated microrayons, as a rule.

"In the event of an accident at any of the facilities, the consequences can be serious for the residents," says G. Savko. "For this reason, it is extremely important to implement the gorispolkom's plan: to take all ecologically hazardous production outside the city. As far as the accident is concerned, this is a 'standard' situation here, in the sense that it is irresponsible. Industrial workers have been using old tanks that have been written off to hold acid for a prolonged period of time, without giving any thought to safety at all. What happened was bound to happen. It is good that there were no casualties."

Unlike the railroad workers, those working at the plant regard what took place with unjustified complacency, it seemed. I listened to their conversations, and it appeared that the militia, by cordoning off the region of the accident, and the medical service and the local mass media made the city "all ears" by spreading panic. There

were no casualties and no one was hospitalized in the incident, they say... But who could have guaranteed a favorable outcome at that time? Do we really need casualties for the public to be concerned?

When this article was being prepared, Gorispolkom Chairman V. Gonchar telephoned the correspondents center.

"The plant's managers were warned eight years ago about the need to build a storage area for the acid," he said. "But essentially nothing has been done thus far. The only thing left is to prohibit railroad workers from taking toxic freight to the present unadapted storage area, which is being used jointly by the 'Elektromekhanicheskiy' and 'Elektrosvet' plants as well. Until they have their own base, let them find enterprises with storage areas outside the city and use them."

Listening to Vladimir Vasilyevich, I automatically compared the situation in other Siberian cities where toxic substances are also in a zone that is hazardous for the public. It is similar. Real tragedies are being played out at times for this reason. For example, several years ago over 20 persons died and 250 were hospitalized at the "Progress" plant in Kemerovo because of a chlorine leak from a railroad tank car. Many became invalids for life. The problem of delayed-action ecological "bombs" which need only a fuse threatens everyone equally.

At Ingulets Station

904H0242B Moscow GUDOK in Russian 27 Jun 90 p 1

[Statement by N. Pelykh, chief of the Ingulets Station Commercial Office, as reported by A. Prokhoda]

[Text] Ingulets—A group of railroad workers were poisoned at this station on the Dnepr Railroad because toxic gas leaked from a grain receiving point's storage areas. N. Pelykh, chief of the Ingulets Station Commercial Office, tells about this:

At 1510 hours, a gaseous compound—chloropicrin and a malathion insecticide—was delivered to the storage areas for sanitary processing. This operation is conducted every year before the storehouses are filled with grain, and the railroad workers were not alarmed for that reason.

Meanwhile, the toxic gas began escaping from the poorly sealed room and accumulating in a low-lying area nearby...

Assistant Stationmaster L. Kovpak and operator V. Mayba were the first ones to feel sick, with headaches and vomiting. V. Zhadkov, the station chief, arrived at about 0300 in response to their call, and soon after was forced to call out replacement workers and send the assistant stationmaster and operator to a medical facility for treatment.

Altogether seven persons were hospitalized after the night shift. And only after this did representatives of

civil defense headquarters and the sanitary and epidemiological station appear at the site. We closed the station to train traffic until the extent of the danger was determined. The work proceeded extremely slowly. Only on the second day were we able to find the instrument needed to detect the presence of chloropicrin.

So the "chaos" we organize with our own hands so many times has demonstrated our inability to foresee the possible consequences of our own lack of concern. And a commission was unable to determine who was to blame for the dangerous accident after 4 days. If the circumstances had been different, the consequences could have been even more serious. After all, several houses for railway workers are near the station.

Life in Ingulets is gradually returning to normal. Train traffic has been organized according to a temporary schedule. Some of those who became ill were released from the hospital, but three of them are still in the toxicological department. And the anxiety remains, all the same. After all, a great many questions still have to be answered.

Railroad Violates Regulations, Ships Radiation-Contaminated Meat

904H0243A Moscow GUDOK in Russian 24 Jun 90 pp 2-3

[Interview with E. Freyman, head of the Radiation Hygiene Laboratory, VNII [All-Union Scientific Research Institute] of Railroad Hygiene; V. Chiburayev, chief of the Sanitary Prophylactic Main Administration of the USSR Ministry of Health and deputy chief sanitary inspector of the USSR; and A. Povalyayev, lead scientific associate, All-Union Scientific Research Institute of Agricultural Radiology, by correspondent L. Kizilova, followed by the correspondent's commentary: "With Cesium Sauce"]

[Text] After the Chernobyl catastrophe, 10,000 tons of radioactive meat were dispersed over the country.

"It has been established that in January and February 1990, four five-car refrigerated units were sent on the Transcaucasian Railroad at the request of the Gori Meat Combine in the Georgian SSR, in violation of the procedure in force, for loading and temporary storage before departing for disposal of the radiation-contaminated meat which had arrived in 1986 from the Gomel and Kalinkovich Meat Combines in the Belorussian SSR.

"On 17 January 1990, the USSR Ministry of Railways categorically prohibited the Transcaucasian Railroad from accepting the freight cited for shipment and drawing up transport documents without coordination with sanitary and veterinary authorities, as well as without the consent of the new consignees to accept it.

"However, in spite of the ministry's directive and in violation of the regulations on consumer goods shipments adopted by the USSR Council of Ministers decree No 888 of 25 July 1988, transport documents were drawn up by the Transcaucasian Railroad's Gori station for the loaded refrigerator car units and they were sent to the Gomel and Kalinkovich Meat Combines in the Belorussian SSR without their consent.

"The railcars that were dispatched were stopped by the Ministry of Railways on the route of travel. The radiation and organoleptic tests that were conducted by a commission on 5 and 6 March showed that the meat does not constitute a radiation danger when it is stored, processed, or transported if the requirements established are observed, but it was spoiled because the conditions for storage were violated and it is subject to burial.

"In accordance with the decision adopted at the conference of Deputy Chairmen of the USSR Council of Ministers V. V. Nikitin and V. Kh. Doguzhiyev (minutes No VD-860 of 10 March 1990), the refrigerator units with the meat were sent to the Vilcha station on the Southwestern Railroad addressed to the 'Pripyat' NPO [Scientific Production Association] for burial.

"The actions by shippers in the Georgian SSR and managers of the Transcaucasian Railroad needlessly put the health of the railroad workers directly involved in the shipment of this meat at risk and led to the obstruction of train traffic on the Tbilisi-Khashuri section by groups of people and other negative consequences. The rolling stock idle time and inefficient shipments resulted in significant unproductive expenditures." (From the Ministry of Railways Collegium decision)

Just what happened on the Transcaucasian Railroad? What kind of meat became the reason for conflict and led to a strict order, whose lines have been quoted here?

It is possible that an interview with specialists from three departments—railroad, medical, and agricultural departments—will help to answer these questions.

[Kizilova] What is the significance of the radioactive contamination of the meat sent from Georgia? What kind of danger did it constitute when it was shipped?

[Freyman] The level of the meat's radioactivity was somewhere in the range of 10 to 50 times higher, and in some places 100 times higher, than the background readings. This cannot cause radiation sickness, but exposure in such doses is not desirable, all the same. There is a term—"unjustified exposure of personnel to radiation." This is what took place. Although in very small doses.

They loaded the meat at the Gori station and did not send it for a month. None of the personnel had individual dosimeters. No one measured this dose.

[Kizilova] But how could it happen that the contaminated meat was shipped to the Georgian meat combine for processing?

[Freyman] Recommendations from the Gosagroprom [State Agroindustrial Committee], which were coordinated with the Ministry of Health, provide for this meat to be used: they mix it with "clean" meat, reducing the substance to VDU—temporarily tolerable levels.

[Kizilova] What magnitude is the VDU?

[Freyman] This is information for official use, I believe. I cannot cite it. Ask the USSR Ministry of Health—perhaps they will tell you.

[Kizilova] The managers of the Transcaucasian Railroad have been punished for "independently" shipping the meat. In your opinion, how should they have proceeded?

[Freyman] They should have been following the Gosagroprom recommendations in the republic and used the product for its intended purpose. But they stored the meat for 3 and a half years (after Chernobyl), violating the conditions for storage, and it spoiled and became unfit for food. It should have been buried in Georgia for this reason. But they opposed this in the republic...

[Kizilova] But after all, this is quite understandable, even from a purely psychological point of view... Why must the meat be buried in the republic instead of being sent to the special disposal sites in the 30-kilometer zone?

[Freyman] Yes. This is understandable...

[Kizilova] What was the reading of radioactive substances in the meat?

[Freyman] The highest reading in separate tests was 10^6 curies per kilogram.

[Kizilova] It is doubtful that this figure will mean anything to the uninitiated.

[Freyman] Yes, it must be compared with the VDU. I think the USSR Ministry of Health will explain everything in detail.

[Kizilova] I understood from a conversation with a VNIIZhT [All-Union Railroad Transport Scientific Research Institute] that the VDU readings on the meat are data for official use.

[Chiburayev] That is not true at all. All the secrecy has now been removed from these data.

The first VDU's for foodstuffs were introduced on 30 May 1986 and were set at 1×10^7 curies per kilogram. This was done in connection with the accident at the Chernobyl AES. I think the decision was correct.

P. Burgasov, the chief sanitary inspector of the USSR, approved these VDU's. Later on they were made somewhat tougher. The following standards were introduced

on 15 December 1987: 5×10^8 curies per kilogram for pork and lamb and 8×10^8 curies per kilogram for beef.

A year later the permissible levels were reduced for all products, but they remained unchanged for meat. The question of bringing the VDU down to the international level is being discussed today. Presumably this will be done in a month.

[Kizilova] And what are these international standards?

[Chiburayev] According to the FAO—the UN Food and Agriculture Organization (these are recommendations, not standards!), they are 600 becquerels per kilogram, which is equivalent to 1.6×10^8 curies per kilogram.

[Kizilova] So our VDU's for meat are two to three times higher than the international standards?

[Chiburayev] Yes.

[Kizilova] In a case such as this, do you think it is necessary to produce meat in contaminated territory and ship it to the country's meat combines?

[Chiburayev] I think if the decision were taken now, meat would not be shipped anywhere at all from contaminated territory.

But at that time, after the accident, the Gosagroprom was unprepared for this: it did not have the proper instruments or the proper organization in its activities...

[Kizilova] What do you mean?

[Chiburayev] It was not clear what to do with the meat. By the way, I am deeply convinced that introduction of the temporarily tolerable levels was a sound measure. Though at that time (in 1986), the instructions for people in the event of a nuclear explosion were semisecret and narrowly departmental in nature. Nowadays they have become the property of all the services and departments involved in a situation such as this, and the press should take part in popularizing them.

But at that time, I repeat, no one knew how to act correctly under the specific and very difficult conditions.

[Kizilova] You believe it is wrong to ship "contaminated" products out of the zone, all the same?

[Chiburayev] Allowance could have been made for such a mistake in that situation; it cannot be considered a crime. There was a great deal that was not foreseen there because of ignorance, generally speaking.

Another side to this question is assessing the Georgian workers' actions in shipping the meat without coordination. They acted incorrectly. The meat was kept in insulated compartments. But they shipped it, and it could have reached a consumer's table. But after all, aside from containing an RV [radioactive substance], it was simply spoiled, which could have led to serious consequences.

[Kizilova] But how should they have proceeded there, in your opinion?

[Chiburayev] In a parliamentary manner.

[Kizilova] That is?

[Chiburayev] They should have put the question before Nikitin (the deputy chairman of the USSR Council of Ministers and chairman of the State Commission on Food). This is the way they proceeded in a similar situation in the Belorussian Council of Ministers, for example: they estimated their stocks of contaminated meat, the Ministry of Health gave its recommendation, and 600 tons were buried.

If there is an area for disposing of radioactive waste in Georgia and it has sufficient capacity, it should have been buried there.

[Kizilova] How much "contaminated" meat left the zone and how much was shipped back for burial?

[Chiburayev] I do not know if the Gosagroprom has this information. I can say that 0.1 percent (of the total volume) of meat now being produced in Belorussia contains radioactive substances higher than the VDU. What should we do? Manage the livestock a little better, give them clean fodder and take the radioactive substances out of their organism.

[Kizilova] As I listen to you here I keep wanting to ask you an amateurish—or perhaps naive—question. It occurred to me a long time ago, on 22 March, when I listened to the speeches at the Ministry of Railways Collegium session concerning Chernobyl. In particular, it was mentioned there that the deliveries of potatoes from the contaminated zone to other regions of the country were being continued last fall... Now the discussion has come to meat... And I wondered: couldn't the resources really be found in our vast country to make up for those agricultural products which have been and continue to be produced in the contaminated zone? Are we really that poor? Wouldn't it be better to discontinue all agricultural activity in these areas right away?

[Chiburayev] If they continue to ship products containing radioactive substances above the established standard, this is an outrage and a crime.

[Kizilova] But what can you say about the use of meat that exceeds the VDU in food?

[Chiburayev] The instructions providing for this were drafted by the Gosagroprom and approved by the Ministry of Health in 1986. This is a natural process of "thinning the contaminated meat"—bringing it below the standard. This procedure was chosen as a temporary measure. Later on we decided to discontinue this. But in 1988 the Gosagroprom issued new instructions they did not coordinate with us. They were similar to the previous instructions, but adjusted for the new, revised VDU's.

We adopted the decision and wrote to Nikitin in the USSR Council of Ministers in October 1989, asking that meat no longer be sent out of the contaminated zone.

I return to the accident once again. It should be noted particularly that the country was not prepared at that time to solve a number of problems, including how agriculture should be conducted on the contaminated territory. We hoped that these problems would be resolved in time. We have revised our position since then. But the Gosagroprom, with the government's support, has not changed its psychology. As before, its inspection service is not equipped with the necessary instruments and the sanitary and epidemiological stations, instead of the Gosagroprom, are forced to inspect the products.

[Kizilova] All the same, what do you think about the advisability of growing agricultural products on contaminated territory?

[Chiburayev] I think if we were starting from the beginning today, a cross would have been placed on certain agricultural lands. This question is reflected in the new state program to eliminate the effects of the accident.

[Kizilova] Couldn't we certainly have managed without the meat which exceeds the VDU?

[Chiburayev] What do you think is worse—not receiving enough protein in the form of meat or receiving it from meat with a contamination level higher than the VDU?

[Kizilova] I personally would prefer not to receive enough protein, to starve for a while. Shakespeare gave a good answer to this question: "It is better to reconcile oneself to a known evil than to seek to escape to one that is unknown."

[Chiburayev] But most of the independent specialists would answer this way, I think: it is better to eat the meat which contains radioactive substances within the limits of the VDU's in effect. After all, all of the products we use contain this natural component in one quantity or another.

I repeat: our position has changed drastically since 1986, and this was reflected in the letter to Nikitin.

[Povalyayev] This is the story. When they evacuated the population of the 30-kilometer zone, they took the livestock out as well. It was May, and there was not enough fodder stocked up for winter yet. In conformity with the law of a sandwich deteriorating with the butter, the first day the livestock were taken to pasture was 26 April. The animals had grazed for a week before the evacuation. What was to be done? We suggested that the animals be fed with clean fodder for a month and a half before slaughter in order to remove the radioactive substances that had accumulated from their organisms. But the economic services locally answered: we cannot provide for this.

[Kizilova] And what was done with the livestock?

[Povalyayev] They were slaughtered. The meat from 60 to 70 percent of them was fit for sale and the remainder had varying degrees of contamination. In half of this meat the level of radioactive contamination dropped to the VDU over a period of time—because of the decay of short-lived radioactive elements (this period is 8 days for iodine, for example). In the rest of it, the cesium was retained—higher than the VDU.

They put this meat in cold storage (in Gomel, Minsk, and so forth).

[Kizilova] And what happened to it ultimately?

[Povalyayev] Roughly 10,000 tons of it went throughout the country with instructions for its preparation.

[Kizilova] That is, it went for processing and sale?

[Povalyayev] Yes, although this meat exceeded the VDU, it was fit for use.

[Kizilova] And specifically where was it sent?

[Povalyayev] Where did it go in 1986 and in what quantity? That is hard to say. It was processed everywhere, as it is supposed to be.

[Kizilova] But where is the guarantee of that? Who kept an eye on this?

[Povalyayev] In the production process it was the veterinary services (radiologists, specialists in contagious diseases, and so forth) of the USSR Gosagroprom, and in the trade network it was the sanitary services.

In some oblasts and republics, they were a little apprehensive about this meat, and in some cases they decided to wait before selling it, keeping it in cold storage for a couple of years. In Georgia, the contamination of this meat (over 300 tons) was three or four times above the norm, but it was not dangerous for shipment.

[Kizilova] How do you explain the meaning of the following sentence from the Ministry of Railways order: "The actions by shippers in the Georgian SSR and the managers of the Transcaucasian Railroad needlessly put the health of the railroad workers directly involved in the shipment of this meat at risk..."?

[Povalyayev] This statement is unsubstantiated medically.

[Kizilova] What should they have done with the meat in Georgia, in your view?

[Povalyayev] They should have looked at the veterinary regulations to see what is stated there: any product should be passed by the veterinary service. If the veterinary service had prohibited the meat's shipment, they should have gone to the Veterinary Main Administration under the State Commission on Food. And it could have given instructions where to ship it.

[Kizilova] How much meat of this kind was left in Georgia?

[Povalyayev] According to information as of March, 220 tons were left in the Batumi combine, but it has already been taken out.

[Kizilova] And in other parts of the country?

[Povalyayev] Roughly 3,000 tons were left in Belorussia. They are making a special burial area on the basis of ensilage structures; they want to bury it in the 30-kilometer zone. It will not go into production.

[Kizilova] How much "contaminated" meat remains in business now, so to speak?

[Povalyayev] Some 900 tons—essentially this is not meat. It is being processed for technical needs and bone meal for fattening livestock.

[Kizilova] A letter from G. Sergeyev, deputy minister of health, to V. Nikitin, deputy chairman of the USSR Council of Ministers, on 24 October 1989 states: "...I draw your attention to the fact that the 'Recommendations for the use of meat raw material containing radioactive substances higher than VDU-88' (No 437-1 DSP of 3 July 1988) were approved by V. N. Poletskov, deputy chairman of the USSR Gosagroprom, and were not coordinated with the USSR Ministry of Health."

[Povalyayev] We cannot coordinate everything with the Ministry of Health. However, the use of this meat was coordinated. We simply retyped the recommendations in effect earlier and added the new VDU's. Meat with radioactive substances higher than the VDU has not been released to the trade network since November 1989.

The Correspondent's Opinion

Outside of the official framework of the interview, Aleksey Panteleymonovich Povalyayev tried for a long time to convince me that the danger of living in the contaminated zone had been exaggerated by ignoramuses, that the 35-rem concept was completely humane, and that there was no point in resettling people from the contaminated territories. They simply need to be "taught to live under these conditions." Do not drink the milk, process it into butter. Adhere to the recommendations for "Managing a subsidiary farm in regions of radioactive contamination," issued in 1989 by the Agropromizdat.

In particular, they contain this advice: "Do not scatter firewood or peat about a room," "Do not enter a room in your work clothes," and so forth.

In general, A. Povalyayev, who was one of the authors of this instruction booklet, believes that the state program to deal with the aftereffects of the Chernobyl accident was a mistake, and that it is pointless in investing so much money in it. Moreover, he said, if the effect of small doses of radiation on a person still has not been

established by the world's scientists, it means there is no such effect. "However, in addition to the benefit, radiation can bring harm as well." This is how harmless they consider the effects of radiation in the Agropromizdat work mentioned.

Should we be surprised after this that for four years (but not for a brief period after the accident), the country's people have been fed with meat prepared by a semisecret technology with radiation contamination several times higher than international standards!

Perhaps those who were "a little apprehensive" and left the meat in cold storage—and even let it rot—were correct. And thank God! But then, they did not eat it.

They disobeyed the order in Georgia and shipped the meat without permission. But how many orders and instructions which they now modestly call "mistaken" and which they hid from the public were followed in the country for four years? Can the government be trusted after this?

Instead of taking steps right after the accident, they take them four years later. And this is no less expensive than if "a cross had been placed on certain territories" right away and the people moved out of the zone.

It can be said that everything is clear after the fact, they say. Could the extent of the tragedy have been foreseen? It probably could have, all the same. If there had not been a monopoly on the departments' information. If they had not been in a hurry to report to the center that everything was all right, diligently muffling the echoes of Chernobyl.

Let certain scientists blame the persons who are supposedly increasing the panic now of being ignorant. Time will pass and the truth will crystallize in its unconcealed nakedness.

But the facts remain facts even now. Here is a list of the products to which they have added the "contaminated" meat in processing. Do not eat them, just in case.

Canned food: "Zavtrak turista," "Myaso po-litovski," "Govyadina izmelchennaya," "Svinina pryanaya," "Myaso rublenoye v zhele," and a group of sausage meats.

Sausages: boiled sausage, frankfurters and small sausages, semismoked sausage, products made from pork—salted pork fat, pate, liver sausage, blood sausage, zeltsy, and jellies.

And one more fact. Without waiting for a decision at the All-Union level, Georgia has adopted the VDU for meat which meets international standards.

When this material was being readied for publication, a refrigerator unit with meat from Georgia, which had been sent for burial in the 30-kilometer zone, was still

standing on the border at the Vilcha station on the Southwestern Railroad. It is not clear what happened to it after that, since the Belorussian Council of Ministers decided not to allow the "contaminated" meat into the zone.

As the Southwestern Railroad management said, there is the threat that the meat will defrost, which is fraught with new problems. The criminal miscalculations for four years are turning into today's problems.

MARITIME AND RIVER FLEETS

Maritime Fleet Official Interviewed on Soviet-U.S. Agreement.

904H0246A Moscow VODNYY TRANSPORT in Russian 5 Jun 90 p 1

[Interview with V. Kornilov, chief of the Foreign Relations Administration of the USSR Ministry of the Maritime Fleet by V. Serteyev: "At a New Stage"]

[Text] The center of attention of the Soviet and foreign press is the continuing United States visit of USSR President M.S. Gorbachev. In the course of the visit, a number of important bilateral documents were signed: an agreement on trade, an agreement on abolishing and ceasing production of chemical weapons, an agreement on fixing limits for maritime space, an agreement on World Ocean research, etc. (The readers are being informed about this in detail in the daily national newspapers).

Among the documents signed was an agreement on maritime shipping. At the request of the editors, V. Kornilov, chief of the Foreign Relations Administration of the USSR Ministry of the Maritime Fleet spoke about this.

[Serteyev] Vadim Dmitriyevich, it turns out that until now there has been no legal basis for Soviet-American relations in the sphere of shipping. How did we get along?

[Kornilov] This is how we got along. Until the United States officially recognized our country in 1933, these relations simply did not exist. There was a relatively brief period of beginning to establish maritime relations before the war, joint military work on the sea lanes during the war years, and then—a slump, in the period of the wild outburst of McCarthyism, and the deterioration of the general state of relations between the USSR and the United States.

Essentially, the start of Soviet-American relations in the shipping sphere should be regarded as the end of 1972, when the first bilateral agreement on certain maritime shipping problems was signed.

At the end of the 1970's there was again a deterioration, related to putting Soviet troops into Afghanistan, the refusal of American dock workers to process our ships and the adoption by the United States of a number of legislative restrictions on the USSR commercial fleet.

[Serteyev] How was this expressed specifically?

[Kornilov] At the end of 1981, the American side refused to extend the term of the then-effective bilateral maritime agreement of 1975. A frankly discriminative procedure was introduced toward our ships calling at United States ports—we had to warn the American side 14 days before arrival and wait for permission. The crew lists had to be visaed at any United States consulate a week before the call. Soviet ships were forbidden to transport cargo between American ports and the ports of third countries. Our passenger ships were refused entry to United States ports. A quota was introduced for the transport of cargo for bilateral trade: one-third—on USSR ships, one-third—on United States ships, and one-third—on the ships of third countries.

Under these conditions, the Soviet fleet was obliged to abandon the American charter market. Our maritime shipping companies of course incurred considerable losses.

[Serteyev] But obviously, the United States did too?

[Kornilov] Of course. Especially since the Soviet side took a number of restrictive measures in response. The political aspects, however, proved at that time to be more important for our transoceanic partners than the economic.

[Serteyev] Does this mean that shipping was reduced?

[Kornilov] I would not say that. Life is always stronger than political calculations. Our ships operated actively in the ports of the United States and ensured the delivery of foreign trade cargoes. The volume of this transport last year was about 26.5 million tons. Indeed, you cannot call the number of port calls (822 in 1989) completely insignificant.

[Serteyev] How has perestroika and the course toward new political thinking affected the further development of events?

[Kornilov] Without going into detail, I will tell you only the main thing: in 1985 Soviet-American dialog on problems of maritime shipping was renewed. Eight rounds of negotiations were held. Moreover, in securing the concluding of bilateral agreements, our side was not pursuing the goal of obtaining any sort of privileges. We were striving to bring our relations up to the norm, the same as that for the United States' relations with many other states. Equal rights, mutual advantage and the principle of shipping freedom—that is what lay at the basis of the position of the Soviet side.

The changes in foreign economic activity also "give a nudge" to the need to conclude an agreement. Let us say, while formerly foreign trade operations in the USSR were carried out by 35-40 organizations, now there are over 15,000. Under these conditions it is virtually impossible to monitor adherence to the principle of sharing the cargo.

We realized that, unless we succeed in explaining to our American colleagues the true state of affairs and our sincere striving toward normalizing relations, this will lead to turning back, not only in shipping, but in foreign trade as a whole.

Realizing the role of Soviet-American relations in the development of world shipping as a whole, representatives of major commercial houses and commodity producers in the United States, as well as some ship owners, supported our position and appealed to the President, the Secretary of State and the United States Department of Transportation. Member countries of the EEC, the Commission of this international society, as well as Japan, Norway and Finland, also came forth in support of our position.

Now, as the result of five years of difficult, intense work—the agreement has been signed.

[Serteyev] Have all the problems been removed with its signing?

[Kornilov] Not all of them, but the main ones have. In particular, in determining the procedure for port calls, we are getting away from the 14-day permission notice and going to a 2-day notice. This procedure extends to 42 ports of each party. Seven-day permission is required for the rest of the ports.

Both parties are gaining the opportunity of working in "cross-trade", and the restrictions on passenger ships have been removed. Another new feature of the agreement is the fact that training and training-production ships of the USSR and the United States have obtained the right to call in ports of both countries.

The perspectives for joint participation in line transport between the Soviet Union and the United States have been noted, and there are changes for the better in the transport of bulk cargoes, where only world market conditions will be in effect, etc. In a word, we are at the start of great work, but work on a qualitatively new level.

[Serteyev] How long is the agreement in effect?

[Kornilov] Five years. I think that this is the minimum possible period. After all, a network of agents must essentially be created anew, moorings and terminals leased, etc. All this takes time.

[Serteyev] In the course of the five-year period, will there perhaps be any additions and amendments introduced in the agreement?

[Kornilov] Of course. A mechanism of yearly consultations, in the course of which the necessary amendments can be introduced, has been provided for this. I hope that these will be changes for the better.

"Sovkomflot's" Role, Profits Reported

904H0251A Moscow VODNYI TRANSPORT in
Russian 7 Jun 90 pp 1-2

[Interview with Sovkomflot Board Chairman Igor Sergeyevich Osminin by VODNYI TRANSPORT correspondent A. Kuznetsov under the rubric "VT Interview": "Sovkomflot"—Face to Face With the Market Economy"]

[Text] A regular meeting of the stockholders of the Sovkomflot AKP was held recently at USSR Minmorflot [Ministry of the Maritime Fleet] at which the results of enterprise operations for the past year were summed up. The stockholders—representatives of the shipping companies and the ministry—noted that Sovkomflot has earned a profit of 15.2 percent more this year than last. The hypothetical budget of the enterprise presented for the current year contains a profit rise of 13 percent. The stockholders, noting that the enterprise has also successfully handled the fulfillment of sector-wide tasks, deemed the work of Sovkomflot to be satisfactory.

Our correspondent asked I. Osminin, board chairman of Sovkomflot, to answer a series of questions.

[A. Kuznetsov] VT of course congratulates the collective of Sovkomflot for the positive evaluation of their activity, but frankly speaking, over the years that the enterprise has existed, our readers have found out very little about it. So just what is the Sovkomflot AKP, what are the aims of the organization and what is the mechanism of operation?

[I. Osminin] Sovkomflot was organized in the form of a joint-stock commercial enterprise [AKP] two years ago. The joint-stock form of structural and financial organization for shipping enterprises is the most widespread form in countries with a market economy. The founders of Sovkomflot pursued, in its creation, the aim of testing a structural and organizational model toward which other enterprises in maritime transport could also be oriented with the institution of market relations in the country's economy.

[A. Kuznetsov] So they can now see their near future in the mirror of Sovkomflot today?

[I. Osminin] To a certain extent, yes. The whole package of laws adopted or being adopted by the government testifies to this. The shipping companies will be similar to us if it is namely they, rather than the ministry, that enter into tax relations with the state and can dispose of the remaining profits at their own discretion. The cornerstone of the coming market economy is naturally competition, and in order to withstand it they must have a field-oriented and mobile production structure of a high level, otherwise they will not stay afloat. Our principal task is to facilitate to the utmost the resolution of sector tasks or, in other words, to earn as much hard currency as possible to replenish the fleet with modern vessels.

[A. Kuznetsov] It has been heard that Sovkomflot is a unique sort of enterprise...

[I. Osminin] Western observers have christened us "unique." Judge for yourself, anyway. There were 132 vessels on the balance sheet of the enterprise as of the first of January with a total dead weight of about two million tons, and an average age of less than eight years. This whole fleet has been acquired exclusively through the income from business activities in the foreign market and foreign loans. The state has not spent a single kopeck on either its acquisition or its operation. The enterprise operates based on principles of complete hard-currency cost recovery and self-financing. Sovkomflot either entirely or partially controls a number of foreign companies to which belong, including the fleet under construction, some 40 vessels with a total dead weight of about one and a half million tons.

The fleet has received income of about 215 million rubles of freely convertible currency over the past year alone. The structure of Sovkomflot contains no subdivisions and is directly engaged with issues of personnel, dispatching, operational and technical-support operations of the fleet. It obtains these services from the shipping company operators for five percent of the commissions in freely convertible currency [SKV] and, besides that, the enterprise pays for the wages of the ship crews (almost 4,000 sailors) and the maintenance of shore workers in the shipping company operators engaged in supporting our fleet entirely out of the income in SKV.

The staff of Sovkomflot itself is 110 people. The structure of the AKP, in other words, has no subdivisions that are maintained at the expense of fleet operations.

Our model cannot, of course, in any way be blindly superimposed on the current structure of the shipping companies. But the principle is probably suitable—the shipping enterprise should be organized in such a fashion under market conditions that its structure has no subdivisions or upper stories that do not provide for their own existence, but rather exist through their own basic activity.

[A. Kuznetsov] Well, it is hard not to agree with you, once a market economy is inevitable. Sovkomflot will probably also be able to untie its hands conclusively under those conditions?

[I. Osminin] Undoubtedly. Although, it must be noted, we enjoy enough freedom today in the pursuit of commercial operations as well, employing the whole arsenal of contemporary methods for organizing the financing of deals, insurance, ship registration, stock acquisition etc. As for the freedom of decision making for the intrinsic development of the enterprise and its productive base, it is naturally restricted under contemporary conditions by the necessity of performing sector-wide tasks first and foremost, and that means the will and directives of the principal stockholder—the Ministry of the Maritime Fleet.

If we are speaking of completely free business, then it is obvious that the stockholders should have an interest only in the level of profits on the capital invested, and an evaluation of the board's activity could be based on that one measure. What the board did and how, in what directions the activity of the enterprise was developed to increase profits—all of this should be exclusively its province without excessive meddling on the part of the stockholders.

There are definite limits here, however, and some issues should be resolved on a sector scale under contemporary conditions. The enterprise was forced to consent with its principal stockholder to pledge a portion of its fleet to foreign banks to obtain credit to support the construction payments for new ships, for example, under the extremely complicated situation in the country with the receipt of foreign-currency credit and the existing procedure for licensing the receipt of credit abroad and in the face of the exceedingly guarded attitude of foreign banks to grant credit to Soviet risks. The banks refused a lien on ships under the Soviet flag. We had to make an unusual decision—transfer part of the fleet to foreign flags, selling them to foreign companies and finding therein a way of preserving full control over these companies.

[A. Kuznetsov] Igor Sergeyevich, how does the change of flags affect the crews of those ships?

[I. Osminin] The essence of ownership does not change and, accordingly, nothing should change in the hiring conditions of the crews on those ships, they remain with the same shipping company operators that should provide for staffing them with crews under contract with Sovkomflot.

There is a psychological element here, however—a foreign company and a foreign flag means that the terms of hiring should be according to the standards applied by those companies. Whence the requirement to pay wages in freely convertible currency. Sovkomflot is not against that. The ruble portion of the crew's wages, after all, is ultimately paid through the exchange of income in free currencies for rubles. All deductions for the social development of the collectives of sailors sailing on Sovkomflot vessels are paid through that. And it is not the sailors' fault that the Soviet ruble is not convertible.

[A. Kuznetsov] Well then, I think your answer will not be without interest both for the shipping companies and trade unions and for the sailors. There are already signals that this problem is taking on an extremely painful nature. But, if it is no secret, does Sovkomflot earn anything from this lien deal?

[I. Osminin] No, and that task was never posed. Credit, after all, has been obtained for the construction of new ships. The market price for this type of tonnage has already gone up since the moment of the signing of the contracts for construction (and these are twenty tankers and combination vessels with double hulls, i.e. allowing for contemporary ecological requirements). The sale of

some of the contracts we have signed, allowing for their future growth, will make it possible to pay off a portion of the cost of the new vessels through the difference that has arisen in the prices for that type of tonnage.

[A. Kuznetsov] They were speaking with satisfaction at the conference about the fact that the stockholders have by majority vote refused their dividends from the activity of Sovkomflot in favor of the sector, with the exception of the Baltic and Far Eastern shipping companies.

[I. Osminin] Yes, but the Baltic and Far East people had to submit to the decision of the majority. A certain sum could have been allocated for dividends, of course, but that would not have made sense. The fleet that has been ordered already, after all, including some not for the stockholding shipping companies, will be paid for over several years. The stockholding shipping companies, having split the funds, would have to pay by credit for the new construction at the expense of their dividends, while the principal stockholder would find funds for the sector overall, as well as pay for the credit for new construction, at the expense of its own dividends. It is a large question whether we would have enough funds for this. It was thus decided not to fragment what we have earned so as to make more efficient use of it in a program of upgrading the fleet and resolving other issues in the interests of the sector.

And, second, the program for replenishing the fleet is much more voluminous than the funds we have on hand in the local areas. The shipping companies will thus be unable to pull this cart alone. That is why we have consolidated our funds. Not a new device—when a group of companies, for example, intends to make large investments to resolve certain tasks, they pool funds to do so. Such is the expediency of business. The ministry has acted in the same way by collecting all of its forces into one.

This decision, by the way, was discussed at a session of the sector council with the participation of the chiefs of all the shipping companies, and not one of them voted against it. And this is understandable—everyone, after all, needs a new and reliable fleet that can set out safely to sail the stormy seas of the market economy that awaits us.

[A. Kuznetsov] Thank you.

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Ship Design Concepts Discussed

904H0230B Leningrad SUDOSTROYENIYE in
Russian No 5, May 90 pp 3-6

[Article by B.N. Zakharov under the "Ship Design" rubric: "The Basic Concepts of Ships for Future Shipbuilding; A Discussion"]

[Text] The rubric, dedicated to the problems of creating the ships of the future, appeared on the pages of our journal six months ago. The characteristic feature of the articles published on this subject in the section "Ship Design," is the fact that they were all written by specialists outside the shipbuilding sector. Although the editors do not differentiate between authors on the basis of their departmental affiliation, this fact cannot help but put one on the alert. We should like to think that the lack of publication does not indicate a lack of developments and research in the sector's design and scientific organizations. If this is true, the editors hope that these materials will appear in our journal.

First of all, a clear-cut conceptual boundary must be established between the term, "ships of the future", which has become widespread in the last few years, and the concept of "ships for future shipbuilding". While there is a difference between them, there must also be a precise definition of the temporal segment that separates these ships, including those for which technical documentation for construction is already being worked out.

We must not forget that throughout the world the specialists of scientific and design organizations, shipyards and building berths are constantly working on both improving the architectural-structural designs of ships of various types and purposes and on the individual problems of their creation. In other words, we already have enough experience (our own and foreign) to speak of the requirements, problems and concepts involved in the forthcoming construction of completely automated ships, which should embody the most advanced achievements in architectural-structural designs, in the sphere of hydrodynamics, strength, the newest shipbuilding materials and radar, in the development of reliable completing equipment and in the organization of service to maintain high reliability in the process of operation.

It seems that the predicted period for development of highly profitable ships can to a certain extent be conditionally divided into two time stages. The first stage is the period up to the year 2000—a time of designing, building and experimental operation of highly economical ships of various types and purposes. The results of this work will undoubtedly clear up many of the problems of developing the ships of the future. The beginning of the second stage—drawing up the plans for these ships—must be dated to the period 2000-2005.

This approach is justified, if only because, with the average service life of a transport ship being 15-20 years, the following generation, coming after ships built in the 1990's, will consist of ships built at the beginning of the next century. It should also be noted that the completion of almost all the national programs for ships of the future in the leading shipbuilding countries is timed for the turn of the century, the year 2000, when the true possibility for their mass construction is expected.

Here, our point of view does not coincide with the opinion of foreign specialists, that in this case it is a

question of ships of the future. This terminology is needed rather as publicity, for the ships of the future, in the full and specific meaning of their existence, should appear later. This can and must be spoken of in this way, if only because, along with the already well-known trends in the development of scientific-technical progress in shipbuilding and navigation, one must take into consideration the fact that today we are not in a position to conceive fully of the possible appearance of scientific discoveries new in principle, capable of "overturning" our ideas, for example, methods of ship propulsion, shipbuilding materials, etc. It is difficult today to foresee, with precision sufficient for actual planning, how the growing intensiveness of informing society will affect the processes of designing and operating ships.

Today there are already more than enough examples and signs of the impending problems and results of the new technical revolution, which will of necessity affect the ship development processes. In other words, when drawing up programs for scientific-research and design developments of the ship of the future, the basic prerequisites should differ completely from those involved when working out the requirements for ships to be built in the next 10-15 years. In formulating these programs, we should also realize that creating the ship of the future is an evolutionary process in the period up to the beginning of the new NTR [scientific-technical revolution] and a revolutionary process after the new NTR. If our specialists in scientific and design developments cannot discern these periods, we must again make use of foreign experience and pay dearly for this. These programs must be formulated in the very near future if we are not to find ourselves thrust into the background next time.

When working out the transport-technological and technical-operational concepts of the ships to be built in the future, and especially the ships of the future, in the author's opinion, the following basic prerequisites, along with many others, must be taken into consideration:

1. Formulation of the requirements for ships should be based on one main concept: our transport fleet needs full, effective and equal interaction with the world transport fleet in all aspects of commerce, navigation, cargo-processing technology and ship-to-shore relations, in both foreign and domestic ports. One conclusion can be drawn from this: our fleet should in no way be inferior to the ships of foreign shipowners with respect to technical outfitting, introduction of the achievements of scientific-technical progress, structure and the whole gamut of the organizational aspects of operation. If, for example, wider use of computers along the line of commercial and technical operation is an ordinary matter abroad today, it should become an ordinary matter for our fleet as well. In other words, fitting out the ships to be built in the future with equipment, and the quality of this equipment, should be analogous to that in the world fleet, as should the composition and qualifications of the crews. Hence, it is clear that the tasks of the ministries of the shipbuilding industry and the maritime fleet must be

reviewed when working out an intersectorial national program to create the ships of the future.

2. The problem of working out the technical requirements and concept of the ship of the future must be divided according to ship types. As applied to the service-auxiliary fleet, icebreakers, passenger ships for line cruise sailing, as well as to the technical fleet, it is regarded from certain standpoints, and as applied to the transport fleet—from others. For obvious reasons, priority should be given to specialized superlarge ships. Considering the potentials of the domestic shipbuilding industry, the traditions that have formed and the experience of our shipbuilding, as well as the demands of the MMF [Ministry of the Maritime Fleet] for the fleet in the 13th and 14th five-year plans, it is expedient to pose the question of working out the requirements and developing the construction, in our yards, of three types of new, highly profitable ships: all-purpose ships with a deadweight of 16,000-20,000 tons, tankers with a deadweight of about 30,000 tons and nuclear-powered icebreakers. Working out the technical-operational requirements for ships of these types will reveal the need for a scientific search for individual units, and will show whether we have them at our disposal or not.

3. Recruiting the crew and working out control systems and schemes for the ship as a whole, with the power unit and other mechanisms and devices, should be based on one main position—the crew, from the standpoint of the degree of its participation in the technical service of ship devices should be only the "driver" of the ship, just as in aviation, motor vehicle transport and on the railroad. In this case, along with the tasks of navigation and sailing, the basic duties of the members of the reduced crews should also include commercial functions, particularly in work in the sphere of international shipping. All the technical devices of the ship of the future, particularly the automation systems, should be fitted with integrated communications with the automated shore systems of foreign shipowners, cargo consigners and consignees.

Ships for long-distance sailing should be provided with a complete change of crew at certain points of the route or at the destination points. Here it is a question of navigation which is medically norm-set, the utmost in health and safety (accident-free), for the period of the stay of the crew "complement" on a certain specific ship, on a certain specific line. If it turns out that this sort of "shoulder" principle is not applicable for the fleet, the crews should still remain only navigators with minimal technical service duties. We know that before each run, a motorship or airplane is readied by brigades of mechanics, and at the intermediate stops, it is inspected by this type of brigade, not to mention all types of repair being done. It is expedient to use these same principles in the maritime fleet as well, and in any case, there are no insurmountable principles in this respect.

Achievements in information science and microprocessor computer equipment are giving scope for qualitatively new principles and methods of control, and are

creating the prerequisites and possibilities for building optimum systems of "man-machine" interaction and converting ships into integral automated complexes, controlled from a single main post on the bridge (when underway) and a central operations post (when at anchor) by a single operator.

4. Predictions for the development of navigation and shipbuilding, even for the quite distant future, indicate that the basic type of transport ships will be displacement ships. It is economically inexpedient to operate ships with dynamic support principles, underwater and near-surface, for these purposes on virtually all the lines. There is also no doubt about the fact that diesel power units will remain basic on ships of the foreseeable future. They have so far unsurpassed efficiency and great potentials for increasing it.

5. The chief and final goal of all national programs is the creation of new, highly economical maritime transport ships and new technology for their service and operation. This is the main goal for the MMF in the matter of developing ships for future building. If we look at the range of problems involved in the creation of these ships, seven basic directions for scientific and engineering research can be singled out:

- reducing construction expenses;
- optimizing design approaches;
- suitability of the ships for carrying out high-speed cargo operations;
- reducing operating expenses;
- increasing navigation safety;
- creating comfortable living conditions;
- preventing environmental pollution.

From three-fourths to two-tenths of the components included in the directions are not equivalent in importance, but they require a solution. It is impossible, of course, to discuss and analyze all this within the framework of the article. It is therefore expedient to settle on determining the degree of influence of these directions on the economical quality of ships to be built in the future.

Seeking ways to reduce the building cost through type classification and standardization of design and technological approaches, using advanced shipbuilding materials and using robots and manipulators in production processes is a constant task. It must not be expected, however, that these measures (given the growing cost of the work force) will have a significant effect on reducing the building cost and increasing the profitability of the new ships.

Optimizing the designs at all times was and is the essence of drawing up the design documentation and pursues two basic goals: reducing the building cost and reducing

the operating expenses. The second direction, which ensures the high profitability of the future ships and is in effect throughout the entire period of their operation, is more important. As for conserving energy through optimizing the shape of the hull and advanced designs for the propulsion complex, the losses in our fleet stem not from the lack of solution of these problems by our specialists, but to the slack introduction of what has been achieved. For example, for 10 years (from 1975 to 1985), in the MMF the number of ships with VRSh [variable pitch propellers] rose by a factor of 10, and their total power—by a factor of 15, but nevertheless, in the domestic transport fleet, ships with VRSh constitute approximately 8 percent, and in the Japanese fleet—47 percent.

It is impossible to point today to an energy-saving measure from the standpoint of the propulsion complex: each of the well-known ones (asymmetric stern, idler impeller, nozzles of various types, guide wings, VRSh and VFSH [fixed pitch propellers] with an increased diameter, etc.) has its own sphere of application. The perspective lies in their optimum combination. Hydrofoils, which gain power from the waves when the ship moves, means of reducing aerodynamic resistance, etc., must be used along with them to increase the speed characteristics.

Since a ship is one of the elements of the transport-technological system delivering cargo, the development of the domestic fleet for a long-term period, from the standpoint of its suitability for carrying out high-speed cargo operations, should be defined as the development of advanced transport technology under the conditions of intensifying the processes of transport and transshipment, as well as expanding the integration of maritime ships with other types of transport through:

- complete mechanization and automation of high-speed cargo operations;
- increasing to reasonable limits the cargo-carrying capacity and speed of a ship on the basis of its purpose and navigation area;
- expanding and intensifying the specialization of ships in consideration of standardizing the architectural-structural designs, power units and automation devices;
- creating new types of transport ships and icebreakers for reliable guarantee of transport in the Arctic basin.

Here it should be noted that containerization, today and in the long-term, is a decisive factor for all types of transport. In other words, it can be stated that a revolution has come in the transport-technological system. In reality, the dimensions of the ISO containers and their cargo-carrying capacity have proved to be uncommonly successful, both from the standpoint of the size restrictions of railroad and motor vehicle carriers and their outfitting with the necessary load-lifting devices, and from the standpoint of the size of the consignment (about 30 tons) of a certain specific cargo. It is easier to

sell, store and transport this type of consignment, and, in an emergency, the losses from it will be less. Further enlargement of unit cargo spaces makes virtually no sense from this standpoint.

There is at present, an efficiency promotion concerning the sizes of the containers, mainly with respect to height, although there are also proposals to change the width and even the length¹. The possible introduction of maritime transport of ISO containers in large-cargo modules will primarily affect the transshipping devices at the ports and, in consideration of the conditions that have formed in related types of transport, it is doubtful that there will be any reason for the appearance of ships of completely new architectural-structural types.

Further development of the transport-technological system is oriented toward expanding the sphere of use of intensive technology such as RORO ships, organizing transport in high-capacity modules (unit-packages, adaptors², superunits, lighters, etc.) and carrying out loading/unloading operations with multi-tier stacking of cargo spaces (containers, semi-containers, pallets, bolsters³) and the development, in the regions of the Far North and the Far East, of loading-unloading operations under anchorage conditions, using helicopters and surface effect means of transport. It is proposed to begin transport of citrus fruits on refrigerated RORO ships, of timber—in large-capacity packets and unit-packets, of containers—using specialized low-profile two-tier railroad flatcars, etc. This all pertains to transport of general cargoes. As for bulk carriers, tankers, chemical carriers, gas carriers and refrigerator ships of the traditional type, and railroad ferries and some timber carriers, from the standpoint of both architectural-structural types and conformity to the requirements of advanced transport-technological systems, everything is in general clear here.

As can be seen, there are no transport tasks that are new and specific in principle facing the maritime fleet in the next 10 years or more. Essentially, the evolutionary development of the architectural-structural designs is specified on the basis of widescale introduction of the achievements of scientific-technical progress, i.e., the creation of new ships for traditional purposes, but fitted out with technical devices and equipment new in principle. The increase in the efficiency of loading-unloading operations should take place through:

- increasing the power and productivity of cargo devices;
- automating loading-unloading equipment;
- optimizing the systems and processes of loading and unloading;
- using fast-access hatch covers, landing ramps, cargo doors, hoists, etc.;
- introducing various devices to simplify loading and unloading, as well as cargo securing;
- devising efficient systems of calculating cargo plans;

—installing a separate cargo pump in each tank of a tanker, etc.

Ensuring maximum suitability of cargo facilities for fully mechanized stowing of cargo or filling in bulk and eliminating manual labor or reducing it to a minimum when securing or releasing cargo, cleaning and washing cargo holds and during other such activities are still important factors for further reduction of operating expenses.

It follows from all of the above that the basic device for achieving high profitability of the ship of the future should be, not a reduction in its building cost, but the utmost reduction in operating expenses, particularly for fuel and crew, as well as through technical service of ship completing equipment that is standardized in all respects, reliable and high-quality.

Reducing the outlay for fuel should follow the course of using inexpensive types of it for the main and auxiliary engines, using fuel additives, installing shaft-driven generators, increasing the efficiency of the main engines and propellers, reducing the roughness of the underwater part of the hull, selecting the optimum sailing conditions, reducing the power consumption of the auxiliary oil separator mechanisms, cargo devices, systems and deck mechanisms and utilizing energy wastes. To claim that full introduction of all these measures when drawing up designs and building ships at our shipyards has become an ordinary matter means, at the very least, to err against the truth.

It has been acknowledged that reducing the expenditures for the crew can be achieved by introducing on future ships a volume of devices for complete automation which would make possible a sharp curtailment in the daily routine work (recording various information items, administrative-economic functions, financial and accounting activity, etc.). This problem must also be solved by combining the occupations of the seamen and transferring the maximum possible amount of work on technical service and repair to the shore. For this, particular attention must be paid, when working out the technical-operational requirements for the ship of the future, to the following:

- working out the Regulations for Maritime Service in consideration of completely new functional relations in the "man-systems and mechanisms-ship as a whole" system and increasing the legal responsibility of each member of the crew;
- revising the entire system of vocational training of seamen in consideration of combining vocations and inculcating sound skill in commercial activity;
- legal conditions for work (from the standpoint of the seaman as an individual), including wages, health protection, communication with family, legal protection, etc.;

- working out a service complex, i.e., for all types of repair, supply with disbursement materials, technical service, clearing and cleaning the cargo facilities, etc.;
- systems for carrying out mooring operations, in which the crew should take a minimal part. Here two paths must be taken: maximum robotization and mechanization of all the actions necessary during mooring operations on the ship itself, or before mooring, deliver mooring brigades on board by helicopter or harbor launches;
- problems of fire-proofing ships, in consideration of a small crew, and the attitude toward this of the classifying associations;
- analysis and calculation of the growth of "ecological risk" when operating ships with a small crew.

The factors listed are not only basic to a substantial cutback in the crew size of ships of the future, but also a reason for sharply stiffening the requirements for the reliability of the ship completing equipment and shipbuilding materials and for organizing service and raising the quality of engineering and yard work.

The level of technical-operational improvement of ships of the new replacement tonnage and their economic effectiveness will depend to a certain extent on the optimality of the parameters and qualities of the ship completing equipment installed. At present, virtually all the basic automation devices produced by domestic industry are characterized by a low level of standardization, reliability and repairability, high metal-intensiveness, unsatisfactory structural execution and high cost. This is equally true of all the completing equipment.

There are many reasons for this, and one of them lies in the fact that domestic production is not particularly oriented toward developing ship completing equipment—it is not a leading sector. The lack of the necessary production capacities and the low series production capacity of manufacture make it impossible to fit out the ships with standardized items. The replacement of equipment generations has been exceedingly long drawn out. Much of the trouble has been caused by the system of ordering and producing it, for in the overwhelming number of cases, in our country a specific ship is designed for specific, already existing equipment, i.e., the designer and purchaser are deprived of any possibility of selection in consideration of the multitude of parameters and properties required by the functional tasks of the new ship.

Increased navigation safety requires the availability of devices for instrument checking of the seaworthy qualities of a ship underway, selection of efficient conditions for sailing in storms (calculating the course and speed, satisfying the safety criteria), a heeling-trimming control system to stabilize the ship when pitching, support in the

required limits of the characteristics of trimming, stability, strength and optimization of the trim. The outfitting of the ships should make maximum use, not only of automated sets of maritime radio equipment with higher reliability and accuracy, and systems of maritime satellite television communications, but also of automated integrated systems with a corrected electronic navigation chart on the navigator's desk, as well as dictating machines to take the place of keeping ship and engine-room logs.

Efficient new devices for emergency braking of a ship without using the anchors should be developed and introduced. Instead of lifeboats, dinghies and rafts, only life-saving modules should be used. A helicopter should possibly be included in the complex of life-saving equipment for people on a ship. There should be a more attentive attitude toward the problems of ensuring good visibility from the wheelhouse, both of the horizon in general and along the course of the ship in particular.

All of the measures indicated here to increase navigation safety and many others not mentioned, will lead to an increase in the building cost and operating expenses of the ships. Therefore, when introducing them, well-founded restraint must be shown, from both the engineering and the economic standpoint.

The most obvious trends in the development of the fleet, along with the increased technical complexity of the ships, will lead to increasing the proportion of underway time, which will have a marked effect on the members of the crew. Therefore, great attention should be paid to the ergonomic, sociological and psychological conditions for the stay of the people on the ship. These conditions should be in no way inferior to those ashore with respect to the parameters of safety, comfort and satisfaction of the needs of the people during work and leisure.

Each ship should be ecologically and hygienically clean and safe. As an object it should eliminate the possibility of violating the future requirements of environmental protection or the possibility of a deterioration in the health of the crew, even in emergency situations.

Of course, by no means all the questions and problems stemming from and related to the transport-technological and technical-operational concepts of the ships to be built in the future, especially the ships of the future, have been reflected here. A different goal was pursued: to show, by using several examples, the need for extremely rapid development of an intersectorial national program to develop the ships of the future, in which particular attention should be paid to seeking ways to reduce operating expenses sharply. At the same time, it must be considered, that the development of ships with a minimal staff, controlled from a single post by one operator, is based not only on automation, but also on a group of complex and difficult problems of the structural reliability and safety of the completing equipment and the shipbuilding materials.

Footnotes

1. 45-foot containers have already appeared.
2. An adapter is a platform to transport enlarged cargo units.
3. A bolster is an open semi-container.

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Shipyard Activity Reported

904H0230C Leningrad SUDOSTROYENIYE in Russian No 5, May 90 pp 35-38

[Report by A. N. Khaustov: "At the Shipyards"]

[Text]

Leningrad Admiralty Association (LAO)

One of the important stages in the work of the LAO in 1989 was turning over the next maritime salvage and rescue vessel (Order OS-6). After laying the keel in the building berth in February 1988, the hull was shaped at a rapid rate: by the end of the year a monthly outstripping of the preceding order was noted. By the beginning of 1989 the shipbuilders had manufactured 85 percent of the assembly units. In July they began to prepare the ship for launching, and in September the mooring trials were in full swing. Next came the underway trials, stepped-up work at the delivery base, State trials and finally, on 30 October 1989, the acceptance act was signed.

Okean Shipyard

The next ore carrier, the Kooperatsiya, was sent on its first run—to the underway trials—on September of last year. This ship, with a displacement of 63,000 tons, was built for the Far East Shipping Company. The fishing trawler Konstruktor Koshkin, also built at the Okean yard, has already been approved for deep-sea fishing. After the first run the crew sent the shipyard a telegram reporting the output of the half-millionth batch of tinned fish. The reliability of the ship structures and production equipment and the absence of vibration at the stern of the ship were also reported.

Severnaya Verf Leningrad Shipyard

The scientific-research ship Povolzhye, launched in July 1989, is supplementing the fleet of scientific ships. The ship was designed on the basis of the hull of a motorship with horizontal cargo processing, the S. Kirov. An analogous main power unit was installed. For the rest—it is an entirely different ship. A computer center, scientific laboratories with sets of instruments and devices to carry out oceanographic research, observe artificial satellites, etc. are provided on board. The scientific staff and members of the crew will have all the necessary conditions for work and leisure during the long ocean expeditions.

Neptun TsKB [central design bureau]

The shipbuilders developed the Kottedzh floating dacha for fans of leisure at sea. On a platform with two pontoons, made of noncorrosive steel, a metal superstructure is installed, in the form of a cottage with an area of 13.5 square meters, with insulation and an interior finish of water-resistant plywood. On the roof of the house is a solarium. An outboard motor with 22.1 kw power is provided as a propelling device. The Kottedzh is therefore at once a mini-dacha with all conveniences for the leisure of four persons, and a floating means of transport.

Kherson Shipbuilding Production Association imeni 60th Anniversary of the Lenin Komsomol

The renovation of the open building berth will now make it possible for the association to build ships much larger than before. The workers of the Chernomorgidrostroy Trust expanded and strengthened the building berth pad. Several thousand cubic meters of earth were removed from a foundation pit 200-meters long and about 10 meters wide. Next, the reinforcement and new crane tracks were installed, and the concreting was done. The covered building dock and docking basin were also renovated. The area to form the superstructure units was also to be concreted. The expansion of the building berth opens up new possibilities for the Kherson shipbuilders.

Vympel Shipbuilding Production Association

Welding and thermal metal cutting are extremely important technological processes, without which the creation of ships is now inconceivable. Constant attention is being paid to improving these processes. In the last few years the association has introduced a technology for oxyplasma cutting of hull steel 6-30 mm thick and sheets made of an AMG [special metallurgical graphite] alloy, over 10 mm thick, which makes it possible to reduce to a minimum the undesirable effect of edge nitriding during cutting. The gas cutting section has begun to use ASSh-70 three-cutter hinged machines for propane-butane-oxygen cutting of steel parts along master forms, without requiring a high machining frequency (thickness 6-100 mm). The Granit-3U3, PDG-502 and PSS-201 semi-automatic machines are used as the basic welding equipment for welding in CO₂. The ADSV-6 automatic machine welds the lengthwise seams with a nonconsumable electrode in an argon medium. In this case the reverse side of the seam is shaped by using a cooled copper backing. Work is being done to introduce the Vympel assembling-welding unit, which ensures automatic welding of steel panels under a layer of flux, with the reverse side of the seam shaped by means of a flux-copper backing.

Chernomorskiy Shipyard Production Association

The furniture-molding shop of the ChSZ is producing sets of Olena panelboard furniture and Vorskla padded furniture, marked with the State Seal of Quality, as well as wooden models for casting molds. The shop has

introduced a plan for scientific organization of labor, which affects its production structure, system of technological preparation, centralized delivery of materials, operations-production planning, control, accounting, etc. Regulations on the structural subdivisions and official instructions for all categories of ITR [engineering-technical personnel] and charts to organize the jobs of workers and ITR have been drawn up. A system has been provided to train and improve the skills of the personnel. Production has been reorganized on the principle of flow-line manufacture of furniture. On the basis of the technological processes and specialization of sections worked out according to YeSTD [unified system of technical documentation], brigade outfits have been formed, corresponding to the material outfits. Charts for cutting out wood-chip boards, sheet and rolled materials have been issued to the work places. A route system of startup, control and accounting has been introduced into the operations-production planning. As a result of the improvement in the system of preparing for production, organization and control, and the use of standard plans for the work places, the product output has increased by a factor of 1.5.

Plant imeni 61 Kommunar

The refrigerator transport Sevastopolskaya Bukhta completed last year's turn-over program for the Kommunar workers, when it left the yard's water basin at the end of December. This ship, about 134 meters long, with a displacement of 10,500 tons and a speed of 15.3 knots, is equipped with an efficient production refrigerating unit, which can maintain a temperature up to -29°C in all five cargo holds. Modern ship navigation devices ensure safe navigation. A swimming pool, sauna and gymnasium are provided for the crew. The housing and public facilities are air conditioned. The shipbuilders dedicated the launching of the ship, which took place on 12 August 1989, to the 200th anniversary of the city of Nikolayev. The yard workers and numerous guests attended the triumphant meeting. N.V. Maznitskaya, the young yard worker who christened the ship, wished it successful and long sailing. The sections of the next refrigerator ship were laid soon after at the sloping building berth that had been released.

Ritm Scientific Production Association (NPO)

Cooperation between the Ritm NPO and the Sudostroyeniye State Economic Association (NRB) is developing successfully since the signing, in 1987, of a contract on direct relations. Joint work is being carried out, for example, in the sphere of quality control of welded seams, using a colored liquid which penetrates the microcracks. Pipe bending tools, painting equipment and impact wrenches are being supplied to the Bulgarian Building berths. Cooperative production of consumer goods is being organized. Mutually advantageous contracts have also been signed with the "Optical Technology" GKHO [State Economic Association] and "Program Systems and Products" GKHO. The direct relations are not limited only to scientific-technical

contacts. Last summer, the children of Ritm colleagues visited Varna, and the children of Bulgarian shipbuilders visited the Parus pioneer camp in Leningrad.

Yaroslavl Shipyard

The volume of consumer goods production at the yard is sharply increasing. In 1990, approximately 9.4 million rubles worth of goods needed by the population will be produced, as against 6.8 million rubles worth in 1989. In the future, the yearly increase should be 20 percent, so as to be at a level of 23 million rubles a year by the end of the 13th Five-Year Plan. Consumer goods production is slated to develop mainly in three directions. These are—the manufacture of furniture, objects made of film and leather, and also metal items. As the result of introducing tax benefits for the profit obtained from the output of consumer goods, this item of revenue has become a true source of funds directed toward the development of housing construction and the solution of other social problems.

Baltiia Shipyard

The changes in the country and the republic affect the functioning of the yard in one way or another. For example, the supply of equipment has grown more complicated. To create a ship, there must be clear-cut relations with hundreds of suppliers in various parts of the country, as well as abroad. Irregularities in the economic system have an immediate effect on the smooth pace of arrival of completing items and equipment, which threatens the deadlines established for turning over ships. For example, because of the strike in Armenia, the supply of diesel generators was disrupted. Yerevan did not provide completing items to Khabarovsk, which also has business ties with the yard. The trend toward a transition to direct economic relations with supplying enterprises instead of capital distribution can be realized only with unconditional fulfillment of contractual obligations.

Krasnoye Sormovo Shipyard Production Association

Every year the association sends 50 grant-aided students from the yard for training at Gorkiy Polytechnical Institute. They are selected at sponsored schools, SPTU [vocational-technical secondary schools] and tekhniums. The students are paid a stipend 30 percent higher than the State's. If the student gets a "4" or a "5" grade, he receives a 25 percent increase in the stipend; if he has "5+s" only, the increase is 50 percent. Since last year, the association has concluded a contract with each future stipend candidate, in accordance with which, if the student is dismissed from the VUZ he must return the sum paid for the training period to the association. In five years, the association has spent about 3,000 rubles for each stipend recipient, and has transferred the same amount to the institute for the training needed to produce a specialist.

Volgograd Shipyard

The need for efficient consumption of material and fuel-power resources under today's conditions is clear to everyone. The saving is achieved as the result of introducing specific suggestions from workers and specialists. Among them are the use of mechanical argon cut plates at stations for manual arc welding of items made of aluminum, welding vertical fillet welds for structures 5-12 mm thick, by the "top to bottom" method, using flux-oxygen cutting of heat-resistant castings with an iron powder feed, and introducing, for semi-automatic welding machines, all-purpose stamp cassettes for the wire, which contribute to an improvement in the quality of winding the welding wire on them and its more complete utilization.

Vyborg Shipyard

A rise in the quality of the output is directly related to the measuring devices used and the level of metrological support. The yard has over 18,000 different measuring instruments, devices and attachments. Linear-angular, electrical, thermal-electric and manometric measuring devices are widely used. All of these instruments are under the jurisdiction of the metrological service, which ensures the unity and reliability of the measurements when developing and issuing the products. The metrologists claim: "Tell us the accuracy with which you measure, and we will name the time in which you live."

Dalzavod imeni 50th Anniversary of the USSR

A creative approach must often be displayed when solving the technical problems that arise in the process of repairing ships of various types and purposes. There is a large field of activity here for innovators. In just the first six months of 1989, over 600 yard workers handed in 648 efficiency suggestions. Some 569 of them were introduced, which made it possible to reduce the labor-intensiveness of the work by 85,000 norm-hours. From the results of the an inspection held at the yard, among the most active efficiency experts, P.M. Voytyuk, brigade leader of the ship hull repair workers, V.V. Valkov and V.R. Goyda, foremen, N.A. Vasilkovskiy, engineer, P.P. Tsinovnik, ship pipeline worker, and M.S. Kuptsov, V.V. Popadenko and L.V. Kozina, engineering technologists, were commended. Engineer K.A. Otroshchenko, who has worked at Dalzavod for 40 years, has several times received the honorary title of "Best Efficiency Expert of the Yard".

Feodosiya Production Association imeni 26th CPSU Congress

Work under the conditions of cost accounting imposes heightened demands on norm-setting, particularly with respect to determining valid expenditures for each planning-accounting unit of an order. A rise in labor productivity and reduction in production cost is related to the time norms for fulfilling the planned work, estimated on the basis of the established norms. There are 224 norms

in effect in the association: 109 sectorial, 92 intersectorial and 23 local. As the result of analyzing the data on the level achieved for equipment, technology and labor organization, as well as in consideration of the results of motion-time study observations and recorded percentages of the of the norm revisions, lowered coefficients were established and came into use for 177 time norms. Norm-setting for the technological processes is one of the components of the automated system worked out for technological production training. Under the present conditions, all the technical and organizational problems should be solved in consideration of the requirements for NOT [scientific organization of labor] and minimization of expenditures.

Baltic Shipyard Production Association

Since 1 January 1988, only Leningrad citizens have been recruited as working personnel in the association, because, by decision of the Lengorispolkom (December 1987), for each worker from any other city, accepted for work, as well as to the base SPTU (March 1989), payment amounting to 13,000 rubles has been collected for the development of the city's social projects. Formerly, a maximum of 400-500 persons were accepted yearly for spaces in the dormitory. Since this source is virtually cut off, stabilizing and securing the personnel is becoming an extremely important task. The personnel turnover continues to be high, however. In the first nine months of 1989, 1,214 persons were accepted in the association, and of them, 547 were on free hire, 486 were graduates of the base SPTU, 119 returned to the yard after doing service in the USSR Armed Forces, 29 were young specialists from tekhnikums, etc. In this same period, 1,353 persons were discharged, including: for dissatisfaction with wages—189, for lack of housing area—105, because of reaching pension age—102, because of dissatisfaction with work—83, because of the distance of their place of residence—65, because of being called into the army—54, and 46 persons failed the test period. Some 141 persons were discharged for various violations. In all, the loss of listed personnel constituted 139 persons.

Sevastopol Marine Yard imeni S. Ordzhonikidze Production Association

One of the public opinion polls carried out by the associates of the Laboratory of Labor Sociology and Psychology was devoted to social-everyday problems. In addition to the extremely critical housing problem, the questionnaires paid particular attention to the shortcomings in the work of the yard dining halls, as well as the therapeutic-restorative institutions—polyclinics, dispensaries and recreation bases, where the "demand" has long exceeded the "supply". In their conclusions, according to the results of this and other polls, sociologists note the following negative consequences of the existing shortcomings. In the first place, the attitude toward work is changing for the worse—loss of pride in one's job, sense of responsibility and duty. In the second place, just as in other studies, a direct connection was

detected between the level of labor organization and the state of labor discipline. In the third place, poor work conditions lead directly to a higher sick rate, i.e., the great resource of society—the health of the people—is being dissipated. It would obviously be more logical to spend money on maintaining the health of the workers than on medical treatment for them.

Oka Navashinskiy Shipyard

In order to reduce personnel turnover and improve labor discipline, the yard introduced, beginning on 1 October 1989, a statute On paying Compensation to Workers, Engineering-Technical Personnel and Employees of Shops, Divisions and Services when they retire on old-age pension. Men having a continuous service period of work at the yard of at least 25 years, and women—20 years, are paid a compensation amounting to 500 rubles, from the unified material incentive fund. Another 50 rubles each is added for each year of work above this period. The service period includes time for studying at a VUZ or tekhnikum in the yard specialization, army service, etc. Persons who have committed violations (absenteeism, reporting for work in a state of intoxication, being put into a medically-supervised sobering-up station) are partially or fully deprived of the compensation.

Kama Perm Shipyard

Doing everything toward basic production work without wastes—this is the task facing the organizers of the

Umelets Youth-Production Association, recently created at the plant. Commercial wastes, rejects, and scrap—everything can be used with a careful attitude toward the matter. In addition, the young workers in Umelets, in their time off from their main job, can solve their financial problems as well. The necessary consumer items produced will be included in the yard's plan.

Zaliv Shipyard imeni B.Ye. Butoma

To improve the material support of women machine tool workers on leave to care for a child, the plant administration, trade union committee and council of the work collective have established that they be paid a subsidy amounting to 50 rubles a month until the child reaches the age of one-and-a-half years. The money will be allotted from the material incentive fund. The statute was introduced beginning on 1 January 1990.

Leninskaya Kuznitsa Yard

The AOTV-23.2 heater produced by the shipbuilders will undoubtedly be suitable for fruit growers and rural inhabitants. It can help heat housing facilities with an area up to 100 square meters and heat water and food. The heater, which operates on any solid fuel, can be completed with radiators, pipes and connecting equipment. It has 23.2 kw power, measures 900 X 860 X 540 mm and weighs 180 kg.

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15 Aug. 1990